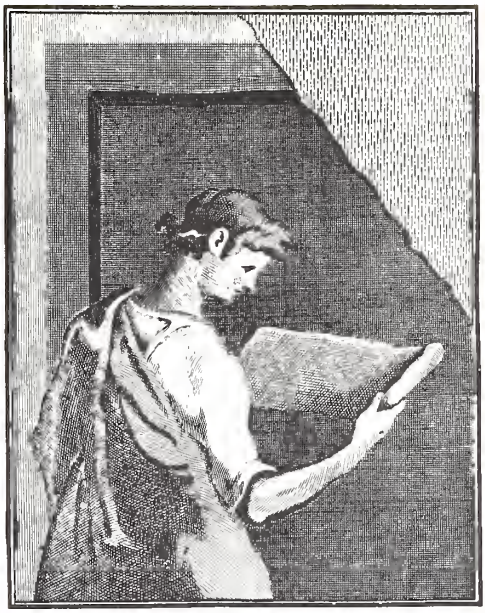


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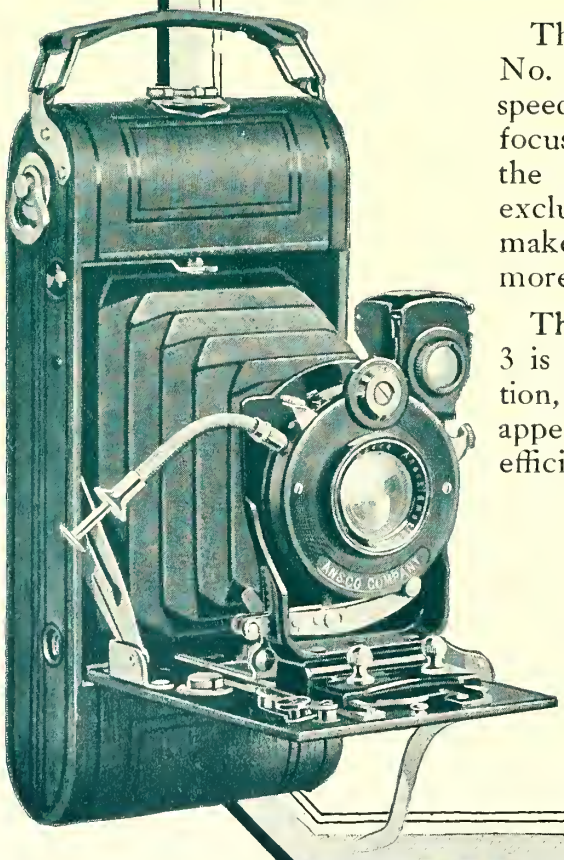


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PATH TO SCHOONER-HEAD
GEORGE R. KING

PHOTO-ERA

The American Journal of Photography

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Vol. XLI **JULY, 1918** **No. 1**

Profitable Commercial and Pictorial Photography

HARRY A. BRODINE

During the past few years much has been written regarding money-making with the camera, and many lists of customers for the amateur output have been printed. How this demand for a return from one's photographic work was created, no one seems to know. Ten years ago no amateur thought of selling his prints such as is done to-day, and at that time pictorial photography reached a higher plane among the rank and file of amateur photographers. Exhibitions of artistic photographs were numerous and of high quality. But these things have passed, and in their place we find a great percentage of camera-workers looking for the profits as well as the pleasures of photography. Perhaps the war has made the amateur need more money to follow his hobby; but it seems to me to be a question of which shall predominate in American amateur photography, art or commercialism, or a combination of both.

From my experience in newspaper-illustration, I know that it is no easy matter to sell photographs unless they are remarkably interesting from an artistic point of view or up to the minute in news-value. If the pictures which you desire to sell are of real news-value—not a small town-fire or the like, but something of interest to the folks in the big towns—you can dispose of them readily if you have the proper connections made in advance. It is one thing to have a salable article, and quite another to dispose of it.

Artistic photographs of the fuzzytype class may appeal to some workers; but they are exceedingly hard to interest the editor of any newspaper or magazine. Some of our pictorialists have gotten away with it at fancy prices; but they rarely succeed in putting such stuff over the same plate twice. If you are interested to make salable pictures and, at the same time, like soft-focus pictures for your own use, it will be better to take them with a small stop and then do your personal prints in gum or enlarge with a soft-focus lens. The editor always likes a fairly large print in black and white on glossy paper, and the sizes preferred are 6½ x 8½ and 8 x 10, which means an enlarging-apparatus if your outfit is a small one. If your photograph has the right sort of interest, the editor will stand for very poor photographic quality. The picture is what he is after and a poor print of an important subject is better than nothing. At least, he is willing to take chances on it. Some time ago, I sold a photograph of a society bride taken as she was entering her automobile. The face was scarcely visible, owing to the awning leading to the curb cutting off the light, which was very bad. A rather blurred and undertimed negative was the result and prints from it were virtually useless. The society editor wanted pictures of this event, and it was up to me to furnish him with them. The desired result was obtained by assembling all prints made of the bride at Palm Beach, Newport and other places and selecting one taken from the same angle as the wedding-photograph. All that remained was to use the face of the good picture in conjunction with the wedding-gown—a few dabs by the artist, and the trick was done. This resulted in the sale of two pictures and pleased the editor to beat the other fellow to it. Of course, very few amateurs desire to take up the strictly news-feature of photography, as it requires some capital and there is a considerable loss in unsold copies. One of the largest concerns doing this class of business destroys thousands of 8 x 10 and larger prints annually which have not been sold, and on account of their fleeting value it is inadvisable to retain more than one or two copies. On this account, alone, only occasional chances should be taken on work which must be turned out and sold quickly. If you happen to be covering some extraordinary event, you must beat the other fellow to the editor or it is all off with your effort until the next time.

Most amateurs who have become interested in

getting a few dollars from their prints have landscapes and marine-views to offer, and it is possible to derive some extra money from their sales; but it is not such an easy matter to accomplish as it has been made out to be, unless you are a salesman and can make a technically good print well composed. As I said before, this means 6½ x 8½ or larger prints to get the proper consideration, and unless you are prepared to do this work it is a waste of time to attempt it. Nine out of ten customers are unable to see the beauty in a small print, and informing them about the enlarging-possibilities of small negatives never seems to produce any impression. I have found it so and am sure that you will come to the same conclusion once you try your 3¼ x 4¼ prints on a busy man. The secret of successful selling lies in making it as easy as possible for your customer to see what he is going to get for his money.

Large lithographic firms and calendar-manufacturers are always in the market for pretty landscapes and marine-views. Although just plain landscapes are popular, those that show some sort of animal-life are preferred. If your specialty is landscape-work, it is essential that you try to procure bits of nature with good cloud-effects, as this enhances the salable quality.

If you live in an agricultural section, you should specialize in agricultural subjects and find out who are the most likely customers for your work. In the case of farm-machinery and live-stock, it is necessary that you find the best way in which to photograph them. A study of manufacturers' catalogs will give you some idea of the points which he is trying to bring out and he is always glad to see photographs of his product in actual operation.

Almost anything can be sold if you find the right party, and my experience has taught me that there is a market for any type of picture if you try hard enough to find it. Finding your market and specializing in your work are the two most necessary features for picture-selling. I have sold pictures to all sorts of periodicals such as ruby-mining in Burma to a mining-magazine and baking-bread for the army to a baker's magazine.

It is not always necessary to do the actual photographic work to make money at the undertaking. A good knowledge of copying is a profitable accomplishment. Indeed, most of the war-pictures from Europe are nothing more than copies of official and other photographs. When the war broke out, I was in the newspaper-illustration business in Pittsburgh and had a flood of war-pictures. They sold like hot cakes and, seeing that the Germans were advancing rapidly, I went out to Carnegie Institute and found a large number of fine photographs to copy—all for the asking—which showed towns in France and Belgium menaced by the Germans. I copied these and, when the Germans captured a town, I was there with the pictures of the town-hall and other prominent places, and the sale was made. One editor asked if I had made the photographs myself, and it was several weeks before any of them discovered that I had been getting my best stuff from their own library. Louvain, Liège and other places bring reminders of profitable business. All this goes to prove that it requires business-sense to make money with the camera, and unless you are prepared to put almost the same amount of thought into the business of picture-selling, you will find that the returns are very small.

A class of work which has not been overdone is difficult to find in photography; but that of church-architecture, probably, comes closer to this ideal state than any other. In a city, such as New York, there is ample material for a specialist in this line to keep busy for considerable time photographing churches of one denomination. I believe that it has been done before; but there is room for another. In England there are several talented photographers who have made a specialty of this subject and with fine results. Personally, I think that we are behind the European photographers in this class of work. Not enough attention has been paid to this fine subject, and there is undoubtedly a fine opportunity for both pleasure and profit to those who take up this work energetically. Who has not admired the fine etchings of this subject by Haig and other artists?

Choice bits of church-exteriors done in sepia on buff linen stock will give the effect of an etching. The principal points to look after are the composition and the lighting. A study of the etchings by Haig will give a good idea of them both, and then with ample exposure creditable prints should be the result.

I should like to go into detail with regard to other subjects suitable for specialization. If your pocketbook is big, and you are well advanced in photography, color-photography should make a strong appeal to you. I, myself, have never made a photograph in natural colors, but understand the theory of the various processes, and, unless one is an expert in black-and-white work, the stock-bills will reach large proportions before even passable results are obtained. The Autochrome and Paget processes for direct transparencies in natural colors, and the Hess-Ives process for prints on paper in natural colors, are the most commonly employed methods for this



Courtesy of American Annual of Photography

SPEED — THOMAS CARLYLE

work and, next to them, carbon-printing in colors. The prices for this work are high in comparison to work in black and white, but not temptingly.

As I write, I have before me a book with a very large list of buyers of photographs, and know that more than fifty per cent of them are not live buyers. When one looks over this large list, it seems to be an easy matter to sell one's prints. Several of the customers on this list are rated as paying $2.00 and upwards per negative and, after careful inquiry, I have found that in many cases they either are not in the market at all or that their maximum price is about fifty cents per negative. So, when you dispose of a negative to them at this miserable rate, you are giving the best you have, for they pick only the very best and you cannot hope to come out ahead with such customers. Another one rated as paying $5.00 each for landscape-negative will not pay more than $1.00 for the best subjects.

It has been my plan to pay scant attention to published lists, as they are written solely with the idea of filling space, and much in time and postage will be saved by working out your own list of customers. When you specialize, you save much in useless correspondence, and whereas your list may not be as large as those furnished ready made, you are sure that quality offsets this.

If you are situated near a logging-camp, you should find much good material to work on. A photograph of the men sawing a large tree may find a ready sale to both the lumber-company and the manufacturer of the saw, not taking into consideration sales to the men and the trade-journals. If you are on the spot during the tryout of a new invention of any sort, you can turn your photographs to good account by writing a short story and sending it to one of the photographic syndicates who will handle it on a commission-basis if you make the right kind of an arrangement in advance. If you do not give them the impression that you expect something for your work, they simply make a number of copies and sell them at $2.00 and upwards and hand you about $2.00 as your share. A photograph is worth exactly what you can get for it, and if you have a really good one, the best plan is to copyright it at once before any copies have been sent out. The big fellows do it invariably and you should also do it for your own protection.



FEAR JAMES WALLACE PONDELICEK

Character-Lighting and Proper Development

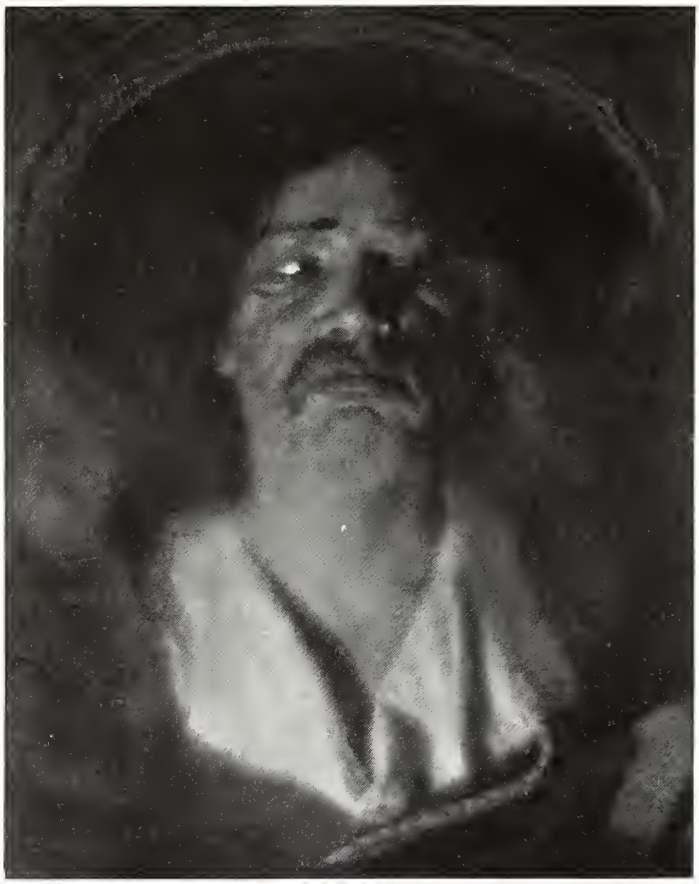
JAMES WALLACE PONDELICEK

IN this article I shall not present any theories, but rather the actual methods I employ to obtain results. With regard to character-photography many things have to be considered. The model must be an appropriate one, and, likewise, the costume. The lighting and direction from which it falls upon the model determines the key in which the picture is to be taken. Some subjects require a high, others a low key, and for some, either key will be effective. Lastly, the proper plate and the developer are of great importance and should be mastered.

Personally, I use and prefer the Standard Orthonon (a double-coated plate) and the maker's formula modified, to obtain the desired result and key. "But why an Orthonon double-coated plate?" you ask. The orthochromatic quality not only gives a better color-rendering, but a fifty per cent better exposure, especially when using electric nitrogen lamps. This illumination possesses more yellow rays than daylight, and the orthonon plate is sensitive to these rays. The reason for using a double-coated plate is that when working with a model where strong contrasts are to be considered, and the detail in the shadows and printable highlights to be retained, it is of great advantage to expose for the shadows, and to develop for the highlights to obtain the very best results.



THE BRIGAND
JAMES WALLACE PONDELICEK



THE GREASER JAMES WALLACE PONDELICEK

The question of exposure applies to all subjects regardless of what key they are in and a high or low key and tone is obtained by development, as I will describe later. Usually, the formula published by the manufacturer is not intended for pictorialists: therefore the individual worker must experiment and modify the factory formulæ to suit his purpose. If my experience can assist those that do not have the requisite knowledge, I shall feel more than repaid for the effort.

When, in using double-coated plates, you expose for the shadows, you must develop the plate until your strongest important highlights appear strong and can be seen easily on back or glass-side of the plate. If you do not develop as far as this, you will have a plate that is flat in quality, simply because the first emulsion—the one nearest the lens—is a fast one. The highlights being overexposed on this first emulsion, they develop flat. Be sure to carry the development through to the second emulsion—the one next to the glass. It is this emulsion that takes care of the highlights and the shadows in the first emulsion. Do not forget that working this way requires the modification of your developing-formula, for should you use it as the makers of plate publish it, the resulting negatives would contain steely, unprintable highlights and harsh shadows. An underexposed plate will not develop through to the back.

The Formula I use for Standard Orthonon double-coated plates is—Stock-solution A: Water, 16 oz.; Pyro, 1 oz.; Sodium Bisulphite, 90 gr. Stock-solution B: Water, 16 oz.; Soda Sulphite, 1½ oz. Stock-solution C: Water, 16 oz.; Soda Carbonate, 1¼ oz. Modified as further directed.

Figure 1 "The Brigand." This was made with three 200-watt lamps at various points and dis-



CHARMING LUDMILA JAMES WALLACE PONDELICEK

tances. One of them was three feet away from the model, a little to the left, about the height of the hat, in order to illuminate the face under the hat. The second was twelve inches from the model in direct line with first light, but above the hat, to throw a strong light from the eyes down. The third was four and one half feet to the extreme right of the model. Exposure was 8 seconds at F 8.

The expression was a thought of some terrible revenge with which I impressed him by making him feel that he was Villa after some Mexican had stolen his pet horse. Developer used: Stock-solution A, 1 oz., B, 1 oz., C. ⅔ oz., Water, 12 oz., at 65°. The increase of water and reduction of stock-solution C or carbonate is what gives you shadow-detail and printable highlights. Another thing to remember is, that when using two or more lights you must use them, at various distances, otherwise a flat lighting will result. Make one of the lights your spotlight and start with this, then use the other lights either to increase the contrast or to strengthen the shadows or to decrease contrast.

In most cases, the expressions of fear, terror, defiance or hate will be expressed best by throwing the spotlight directly from the direction in which the model is looking, as shown in Figures 1 and 3. Expressions of a sneer, ignorance, sorrow or pain, are best illuminated by using the spotlight directly below the model's head, about three feet below and one foot in front. The other lights should act as reflectors, being used to increase or decrease the contrast between the highlights and shadows, Fignre 2. The stronger the contrast, the more force your picture will

have, although it is possible to get great expressiveness with a comparatively flat lighting, such as Figure 3. Watch the model's eyes. These you will find the most important factor in expressing the character. The eyes, as the poets say, are the soul and spirit of a person. Get the model to put expression into the eyes, make him feel the part, then the rest of the face will take care of itself mechanically.

Figure 2 "The Greaser." Two lights were used as a spotlight, three feet below model's head, one foot to right and one foot to the front. This model represents the Mexican who stole Villa's horse. Well! what else would any low "Greaser" do but express a defiant sneer? Developer, water 14 oz., A, 1 oz., B, 1 oz., C, 3/5 oz. Negative in lower key. The more of stock C or Carbonate is used, the higher the key. Do not use more than A, 1 oz.; B, 1 oz.; C, 7/8 oz.; or you will block up highlights—the less carbonate the lower the key. In negatives of a high key, you will have a steeper gradation. Negatives in a low key are softer. By softer, I do not mean flatness, but a negative in which the gradation is more blended.

Figure 3 "Fear." Two lights were used at left of model, twelve inches below the head, two feet to front and three feet to left, one light at the opposite side to lighten the shadows. Imaginary thunder and lightning giving the expression of fear. Developer, water, 12 oz.; A, 1 oz.; B, 1 oz.; C, 3/4 oz.; at 65°. The position of camera is also of vital importance. As you will notice, I use mine quite low. I do not wish to convey to the reader that all or most of my work is tragic or dramatic, and that I do not see the brighter side of life.

Figure 4 "Charming Ludmila." This was made with the three lights at the model's back, and white reflector very close, exactly opposite. The lights were used about three inches apart as may be seen by the shadow on the background.

The expression was a thought of just sweet innocence and dignity. Developer, water 12 oz.; A, 1 oz.; C, 1 oz.; B, 3/4 oz.; at 65°.

Why I Made Better Pictures Twenty Years Ago

EDGAR LOOMIS DAVENPORT.

I DON'T think that I should ever have put the question squarely to myself, or have quite realized it, unless I had discovered some 4 x 5 prints made from glass-negatives taken over twenty years ago. Locality, Northern Pennsylvania; Camera, an ordinary 4 x 5 Rochester optical; lens, single R. R. which came with the box, and a steady tripod. How well I can remember reversing the lens for protection, screwing the box tightly down on the tripod-bed, putting two glass plate-holders, filled, in jacket-pocket, shouldering tripoded camera, getting on my bicycle, and off, to find nature's beauties. Ah! brothers; those were the days! No cares—no aches—no pains; but an unlimited amount of enthusiasm, and love of nature! How good the fresh country-air, as I rushed through it mile after mile and then,—off, and push wheel up a too-steep-to-ride hill ending in a sort of plateau, on the right of which just a few steps through the sumach-trees bordering the road, now a brook-cascade, singing its sunny, laughing song—Ah! if I could stand there now—panting from the hill-climb,—yet eager to "get" this lovely morning nature-scene—and carry the plate home to my little self-built darkroom, where I spent so many hours—learning development. I am quite sure that had any one asked me to go and stay in that not over-cool shed, the hours I did, I should have rebelled. A little further, perhaps a mile up this stream-road, I had—and recall, as I look at the print—my first view of "The Old Saw Mill." I climbed down a mossy bank from the road-way and picked my way out on large stones to center of stream, and as I saw it then—on that beautiful God's summer day over twenty years ago—*you* see it here *now*. In those days, I never thought of "composition," but simply "took" a view as it looked most attractive to me—but, I wander, and tho' the temptation to describe the many beauties of this mill-stream which ended—or rather, began—in a tiny spring at the foot of the mountain—I find that I am leading the reader away from my title-subject. To begin with, I have noticed during the last year, how unsatisfactory my pictures have been to my eye—so much so, indeed, that I have been led to believe I had "lost my cunning," and a few days ago,





THE OLD MILL
CASCADE, CANTON, PA.
EDGAR LOOMIS DAVENPORT

when I found these old prints, I put my thinking cap on—and the light danced on my poor brain. In the first place, then—I *always* used a tripod; secondly, I *always* focused under a large piece of black cloth; thirdly, I *always* used diaphragms—diffcrent sizes for different light,—now, we are getting "to" it;—and fourthly,—tho' first in importance,—I *always* used a "cap" on lens for exposure. I could take off and put it back just the right time for my light and diaphragm,—and I think these notes, coupled with the fact that I seldom "exposed" unless there was good light, will fully answer the title of this article and cause the young amateur to "pause and reflect"—in these days of "too quick" everything. We who have been "ground thro' the Mill" know that any *time* (which means absence of hurry) spent on making of pictures brings its reward. I once devoted over an hour preparing and "posing" a view, or subject for photographing with a "No. 1 Brownie." It was "taken" in one half second,—and my hour's work was repaid by a negative which was "Ace High" and from which a fine enlargement was made. "*Tempus fugit*," is true,—but art flies *with* it, as regards modern day-exposures.

For Owners of Small Cameras

FOR some time past, we have advocated the use of the vest-pocket camera and similar small-sized instruments for the production of various kinds of photographic work, as having many advantages that larger and more cumbersome apparatus does not possess. In particular, we have referred on several occasions to the possibilities of the little camera for portraiture, both indoors and out, and those who have followed our advice in this matter must have been agreeably surprised to find how well every problem of photographic work can be met and successfully solved by the use of the vest-pocket type.

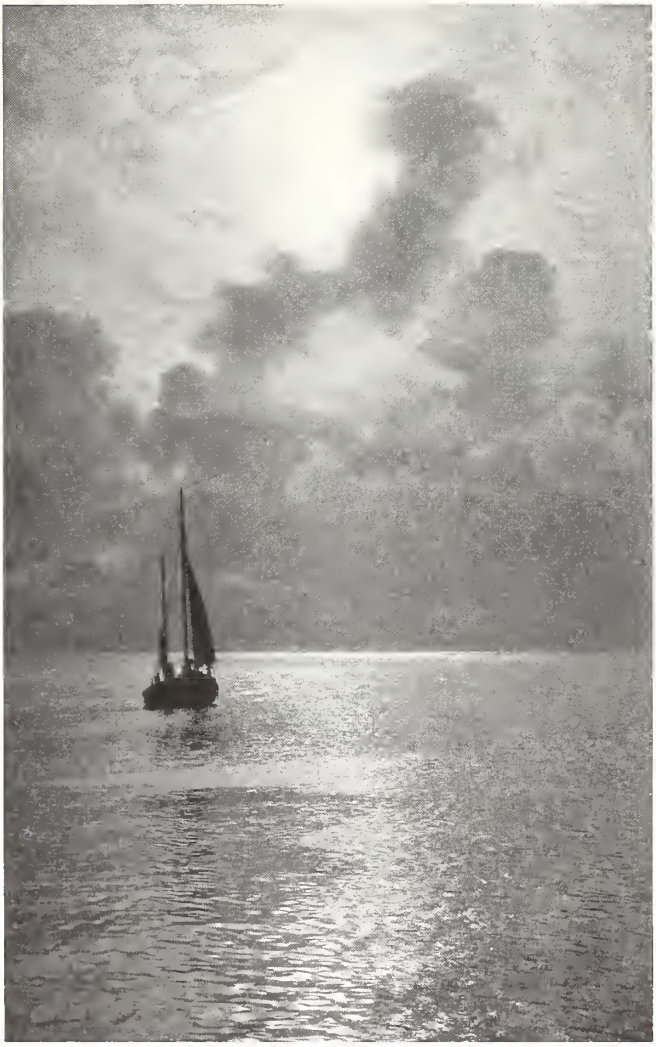
Its utility for deliberate studio-work has only to be experienced to establish the small camera as a permanent institution in the professional studio, in place of many of the larger and elaborate cameras that at present occupy the post of honor. It was pointed out to us, however, in conversation with a professional recently, that unfortunately many professionals have to be slaves to convention. A great number of the clients of the professional, particularly those in what are euphemistically called "high-class" neighborhoods, would not pay the comparatively high fees charged for portraiture by camera-portraitists unless expensive apparatus and a certain amount of display were made in the apartment in which the portrait is taken. True, there are some workers who have fought against this convention and have produced successful work in an environment that has been as little like the accepted idea of the photographer's studio as possible; but a very large proportion still cling to the methods and practice that have come down from the wetplate-days, and the sitters are duly impressed with the elaborate studio-camera and other accessories to the use of which the professional has become, so to speak, acclimatized. At the same time, the production of portraits in these circumstances has been the cause of the frequently repeated statement by individuals that going to the photographer is as bad as going to the dentist. The small and comparatively insignificant-looking camera should be capable of altering all this.

First, the great charm of the tiny camera for portraiture is that it results in naturalness on the part of the sitter, who is unlikely to be overawed by the apparatus and is frequently inclined to treat the whole matter as a joke. In this mood he will cheerfully pose to the wishes of the photographer, and the result will be an entire absence of that strained or "being-photographed" expression which is so difficult to prevent with some models.

Secondly, the extraordinary mobility of the little camera and the rapidity with which it can be used are enormously in its favor, as against the more protracted performance necessary with the studio-instrument, assuming in each case that the operator is thoroughly familiar with it.

Thirdly, the short-focus lens on the little camera (not necessarily short-focus in comparison with the size of the plate, but relatively only to the focal length of the lens on the average studio camera) permits a very much larger aperture being used with a greater depth of field, coupled with short exposure—all points of advantage for the portrait-worker.

Fourthly, recent practice in photography has demonstrated that, given an original negative on a small scale, but of good technical quality, it is possible by a variety of enlarging-devices to



ALONE ON THE SEA
WILLIAM NORRIE



"WHAT IS IT?" FLORENCE AND KARL MAYNARD

produce results approximately equal to anything that can be obtained direct with large plates and longer-focus lenses.

Fifthly (and what is greatly to the point), the question of expense is not to be overlooked at the present time. It is quite possible to make a half-dozen exposures of the same or different poses with the little camera with an equal number of chances of successful results, at the same cost as in the case of one exposure on a larger plate with only one chance of the result being acceptable to camerist and subject.

The argument, therefore, in favor of the use of a little camera for portraiture is very strong, and, to turn to the practical side, it will be found that, apart from the convention or prejudice referred to above, the argument is stronger still and of interest to all photographers.

To take as a typical example the vest-pocket Sibyl camera (fitted with the normal focal length anastigmat lens of about $4\frac{1}{2}$ inches and the Baby Sibyl (with the 3-inch lens), some practical experiments in studio-work have been made with a view to testing their utility in this particular sphere. Beyond the fact that the portraits were taken in a fairly well-lit studio, exactly the same conditions would apply to portraiture with these small cameras in an ordinary well-lit room or out of doors.

By way of digression, it may be pointed out here that the usual fault in portraiture attempted in different circumstances by amateurs is that the plates or films are seldom fully exposed. It is a fact, that has been proved over and over again, that if sufficient exposure can be given, the lighting (provided it is not grotesquely unpleasing) is of secondary importance. The amateur photographer will frequently observe a sitter in an ordinary room when the lighting of the face is quite pleasing, the modeling good and sufficiently attractive to make him endeavor to perpetuate the portrait with his camera. Nine times out of ten the result is a mere hard black-and-white parody of what he observed originally, even though the sitter has remained in the identical position and the lighting has not been

altered. This result will usually be found to be due to underexposure. It is obvious that what the eye sees (apart from color) in the shape of modeling, contour and general lighting can be recorded by the sensitive plate, provided the available light is allowed to act long enough upon it through the lens. This point cannot be too strongly impressed on the amateur portraitist who puts forward the lack of studio and accessories, etc., as an excuse for bad work.

A strong point in practical work which will speedily appeal to the user of the small camera is that, provided it is fitted with a fairly large direct-vision finder and an absolutely accurate focusing-scale, there is no necessity to refer to the focusing-screen at all. The posing and general selection of the composition, etc., can thus be conducted in a minimum of time. To render accurate the focusing by scale, the floor of the studio itself should be scaled by small marks which practically divide it into spaces of, say, square feet, so that the exact distance of the camera from the sitter can be seen at a glance, at any moment.

In our own practice, we have used a small portable aluminum tripod, which can be either readily moved or, if the distance is definitely settled at which the portrait is to be taken, is placed firmly; and further adjustments in the direction or tilt of the camera actuated by a small ball-and-socket head with which the tripod is fitted.—*The Amateur Photographer.*

The Prevention of Halation

ARTHUR H. ELLIS

THIS is a subject that is important to the technically careful photographer. As we all know, an emulsion is of a certain thickness and sufficient richness of silver to enable one, with proper manipulation, to obtain desirable results in photography without using the entire body of that emulsion. In making an exposure, the greatest amount of the time given is on the side of the emulsion that is next to the lens, the undertimed parts being on the lower stratum of the emulsion, or the side nearest the glass. During the exposure, some of the light goes through the plate and is refracted over the surface of the plate by the glossy or shiny part of the back of the negative. Now, when we begin to develop a plate that has been exposed where great contrast of light and shade manifests itself, it is necessary to build the desired image without using the whole of the emulsion. If we can get the desired strength and quality of our negative without going down into the emulsion to a point that will develop the back-lighting or halation, that part, of course, will be fixed out in the hypo and not appear. If we should develop it by using a form of developer that would require the whole of the emulsion to be developed before getting the desired strength and quality of our negative, we must use that part of the emulsion nearest the glass that has had a double exposure or rather the halation part brought out. Carbonate of soda opens the pores of the emulsion. Pyro, or its equivalent, kept "sweet" by sulphite of soda, places the image or makes the picture. If we used a strong solution of carbonate of soda, the emulsion opens too quickly without a sufficient amount of the developing-agent (pyro), and we are getting too quickly down into the refracted part of the negative. By lessening the carbonate of soda—in some instances as low as five per cent. or five degrees strong (hydrometer-test), and in extreme cases we have found that by using only two drops of carbonate of soda with an ounce each of a standard formula—and developing for two hours, beautiful pictures have been obtained by using all of the silver in this slow development and not using one-half of the thickness of the emulsion; therefore, no halation appears. Where extreme contrast is manifested in the exposure, no plate should be developed with carbonate of soda over fifteen or twenty degrees strong. It is up to the photographer to use his judgment with regard to the plate he is to develop, bearing constantly in mind what I have stated. A good formula for a developer is: one ounce of pyro to sixteen ounces of water, sixty or seventy grains of metabisulphite of soda or potassium; then use your sulphite of soda sixty degrees strong, your carbonate of soda thirty degrees, using for normal plates one ounce of each to eight ounces of water. When you have extremes, as I have mentioned, use one-half or one-third or less of carbonate.

Some City-Subjects

WILLIAM S. DAVIS

THE city-amateur who happens to be detained in town during the greater part of the summer is frequently given to lamenting his sad plight, although, as a matter of fact, numberless opportunities abound close at hand that are worthy of the best skill to transpose into pictorial form. The chances to obtain informal genre-groups and character-studies have been demonstrated in a practical manner already by those who know the possibilities from experience, notably Mr. A. E. Churchill's articles, "Photography Among City Byways," in the October, 1914, issue of PHOTO-ERA, and "Just Kids," in the issue for March, 1917. Taking this phase of city-subjects for granted, there are many others worthy of serious consideration, since the list would include street-scenes; a wide range of architectural subjects; trees and plants, together with general landscape-material, in the parks; animal-studies in the streets and parks, including a chance at wild animals where there is a Zoo; night-scenes under artificial light. In addition to this assortment of subject-matter, one must consider marines, which are found around cities that have water-traffic on a large scale. In the case of a port on the seaboard, great lakes or a large river, the opportunities to pick up desirable studies are simply unlimited, either of the piers, buildings and bridges, or attractive groupings from the changing stream of shipping.

Naturally, the locality has something to do with the kind of material met with most frequently; but this is only another way to say that what one city may lack in some particular is generally compensated by the possession of other matter of distinctive character, so it is "up to" the worker to take advantage of this fact and thereby to impart a more individual and local flavor to his work.

Although it is quite impossible to do anything like full justice to the subject in general within the necessarily limited space available, I have selected a few studies of varied character made around New York City by way of suggesting latent possibilities. These were all made in summer, during several stays in town, and I may say that they had to be caught as best they might while going about the city on other business; but a little forethought in planning varied routes from day to day made it possible to cover a wider field in the limited time allowed. The outfit employed was a 3¼ x 4¼ folding hand- and stand-camera for plates, fitted with reversible-back, swing and other usual adjustments, and both reflecting- and direct-vision finders. A light-weight metal-tripod proved a valuable accessory on many occasions, and was not at all burdensome to take along. When first used, the camera was fitted with only a single achromatic lens; but the relatively small aperture rendered it unfit for street-scenes except under favorable conditions, and later I substituted an anastigmat of six-inch focus working at F/6.3, mounted in an Ilex Universal shutter. Lenses that have a focus once-and-a-half the longer way of the plate have in my hands proven most useful for general work, such giving noticeably good perspective on street-scenes, as one can obtain a good-sized image at sufficient distance from the principal object to avoid the violent lines of perspective so often seen in subjects of this kind. The main exception to the rule is when some architectural subject in a crowded location is wanted, rendering it necessary to use lenses of shorter relative focus; but even then, one of medium-angle will many times include enough, and give better results pictorially than an extreme wide-angle lens. I would, therefore, suggest that when possible to have one of about four-inch focus for this purpose, or to use a supplementary lens to shorten the focus of the regular one. Of course, the size of the camera is a matter of taste; but personally I like a small size because of greater ease in manipulation, using the enlarger later to produce prints of the desired size. I always take along at least one ray-filter—for general purposes an Ingento series "A"—for although the opportunity to employ it may not occur so frequently as in the country, one never can tell when some color-combination or atmospheric effect will call for its use. My plateholders are always fitted with some kind of color-sensitive plates, whether it is practicable to employ the filter or not. Owing to the great variety of subjects with a corresponding variation in lighting, frequently met with, a good exposure-meter is helpful to have at hand.

With an outfit of similar character to the one described, almost any kind of subject can be managed successfully; but if one wishes to reduce bulk and weight still more, the possibilities of a reasonably good pocket-camera deserves attention, as most excellent results—both from the technical and pictorial point of view—can



SUNSHINE AND SHADOW WILLIAM S. DAVIS

be obtained under an amazing range of conditions, although certain mechanical adjustments upon a well-equipped plate-camera renders the latter more desirable for architectural work. However, the pocket-camera is very useful for work on a crowded street and in other places where speed and ease of handling count for a good deal; but when using a pocket-camera the camerist must learn to isolate the desired subject-matter and to compose the picture in his mind's-eye when looking directly at the subject, since the small finders—though usually accurate enough to indicate the amount of material included—do not show an image large enough to enable one to study the composition with ease.

During the long days of summer, the early morning and late-afternoon hours not only afford the most comfortable time to work, but they are usually the best in the matter of atmospheric effects and interesting combinations of light and shadow. By using a good-sized lens-aperture and fast plates or films, it is quite possible to make successful snapshots under these conditions at moderate shutter-speeds, unless the illumination is very much reduced by surrounding tall buildings, "L" tracks, or other obstruction. Naturally, if the subject happens to be one of the narrow streets hemmed in by rows of high office-buildings—quite appropriately nick-named in New York, "Canyons"—the only way to get sufficient exposure at the shutter-speed required for moving traffic is to utilize the more vertical lighting when the sun is high.

The shutter-speed required to overcome blur from moving objects varies considerably in the case of street-scenes, as it depends mainly upon the nearness, as well as the actual speed of the traffic. One point in the camera-workers' favor is that most such subjects are made in perspective, so that the movement is approaching or



THE HUNTINGTON PORCH, GRACE CHURCH WILLIAM S. DAVIS

receding instead of passing transversely across the field of vision; but in the case of nearby figures or animals, it is not so much the general motion which calls for care in judging the exposure required, as the quick motion of the legs. Owing to this, a much quicker exposure is necessary to get a sharp image of a walking or trotting horse than to catch a trolley or motor-car moving at the same speed. However, if the nearest moving objects are not less than a hundred feet distant, a speed of 1/25 second is generally quick enough for ordinary street-traffic, and by watching for a favorable opportunity it is frequently possible to allow still more exposure when desirable—provided the camerist adopt the best method to arrest motion at such low speeds. By consulting a meter to test the illumination, one can soon determine whether the maximum working-aperture of the lens is large enough to give sufficient exposure.

Although it is interesting to make snapshots from a motor-bus—and there is a chance to pick up many bits which could not be otherwise obtained—the jolting of the vehicle and vibration from the engine greatly interfere with getting a sharp image. The best time to make the exposure—provided, of course, the arrangement of traffic is pictorially pleasing—is while the omnibus is held up, or is stopping for passengers. Then, by holding the camera well clear of one's body or any part of the vehicle, good results are generally assured with a shutter working at from 1/50 to 1/100 second. An outside seat at either the front or rear—according to the direction one wishes to take the view—is most desirable, although it is possible, sometimes, to obtain quite passable results, from the inside, even through a closed window if the lens is held near enough the glass to avoid reflections.

Many a good bit may be found about fountains and monumental groups in the public squares, though in certain quarters of a city one must be on the alert to circumvent the street-urchins in their consuming desire to form a foreground-



UNDER THE PORTICO WILLIAM S. DAVIS

ornament, for even though they are sometimes quite desirable models for the genre-artist—if caught in unaffected poses when lined up with the idea of having their "picters tooken"—the result is somewhat disastrous from the pictorial standpoint. I remember an experience of this sort one afternoon, in Washington Square, while trying to get a picture of the semi-tropical foliage of a group of cannas planted around the rim of the fountain-basin. I had focused the subject and arranged the composition with care, when a crowd of youngsters quickly collected and arranged themselves in front of the camera with an expectant "smile-that-won't-come-off" expression. Knowing it to be quite useless to ask such a number to move, I waited until ready to make the exposure—then I turned the camera about in another direction and went through the form of carefully considering the new material. This immediately caused the would-be models to change places. Having accomplished this desirable object, I quickly turned the camera back to its original position—a pressure on the shutter-release, and the deed was done, much to the edification of one boy who chose to watch me at close range instead of trying to get in the picture. However if one does much work in the same neighborhood, it is necessary to think up new "stunts" often to fit each occasion.

The value of public monuments and groups of sculpture in the open as pictorial material depends very largely upon making the exposure when the lighting is just right, both in direction and quality. Although sunshine effects, particularly on white marble, are often attractive, it is not advisable to work when the sunshine is very intense—the presence of some haze, or even fog, giving greater softness and roundness to the modeling of figures, besides imparting an atmospheric quality to the whole. Some very beautiful studies from such material have been made under artificial lighting, though the result is not



THE CITY OF TOWERS WILLIAM S. DAVIS

as likely to show the true character of the composition in case of sculpture as when made under a more normal source of illumination.

In addition to such subjects as entire buildings, or groups *en masse*, the many attractive porticos and doorways of churches and other large buildings, and the quaint porches with fine wrought-iron railings of the better class of old residences which have escaped the march of modern construction in the quiet side-streets, all afford excellent material. Here, again, much of the charm depends upon avoiding commonplace conditions, and making a picture at the psychological moment when some particular quality of lighting, or light and shadow, gives a distinctive character to the material chosen. Again, I may say very beautiful and weird effects appear frequently at night under the concentrated rays from some nearby arc-light.

Opportunities abound for charming effects around the entrances of buildings and on the streets at dusk, while there is still sufficient daylight remaining to make the shadows luminous, yet not to destroy the glow from the electric lights. Under these conditions, a comparatively short exposure can be given and detail obtained which gives luminosity to the shadows. A misty evening, or one immediately after rain, is a favorite time with many workers, on account of the interesting reflections upon wet pavements, which serve to break up what might otherwise be an uninteresting expanse of flat tone in the foreground.

Buildings of graceful form silhouetted against a sunset or night-sky make good subjects for decorative treatment. It is somewhat difficult to be specific about the exposure to give under these conditions, especially in the matter of early evening-effects, since the strength of the illumination from the sky alters rapidly; but, within limits, there is generally more danger of under- rather than over-timing. I have obtained negatives of street-subjects with quite enough shadow-detail late in August between 6.40 and 7 P.M. by exposing ten to thirty seconds, with the lens working at F/6.3, using plates of the

speed of those in class ¾ of the PHOTO-ERA Exposure Table. After dark, the exposures will range generally from five to twenty *minutes*, depending upon the number and nearness of the lights to the subject-matter, as well as on their brightness. Naturally, the main difficulty to make exposures of this length on a busy street are the moving lights on passing cars or other vehicles; and when one of these is about to cross the field of view, it is necessary to hold a piece of cardboard, or one hand, in front of the lens until the moving light is out of the way. Moving objects without lights can be disregarded, as they will not make an impression when the exposure runs into minutes. Halation is also likely to appear if a powerful light near the lens is included in the picture; and for this reason such is best excluded if possible, or some opaque object brought in line between the light and the lens. A double-coated or backed plate is recommended for this kind of work, unless films are used.

Landscape-material within city-limits is really more plentiful than is realized generally; and if one does not try to include too broad an expanse of subject-matter in one composition, it is usually easy to avoid extraneous objects which might spoil the sylvan aspect. Even in such a highly developed example of landscape-gardening as Central Park, New York, there are many bits which in a picture readily pass for untamed nature, and in other parks of the same city, such as the Bronx, there are literally acres of unspoiled landscape-material from open meadows to thick woods, that give one a wide range from which to choose. Much the same can doubtless be said for all our larger cities, such as Boston, whose wonderful system of parks is well known.

Some of my interesting woodland pictures were made in Bronx Park, near the Botanical Gardens, though I doubt whether an unsuspecting reader would guess that it was a park-scene.

The possibilities around the waterfront and harbors of any large port would take a separate article to describe, so in the matter of treatment I must refer the reader to several articles upon marine-work to be found in back numbers of this magazine, and limit myself now to advising those who have the opportunity to make it a practice to look about the piers and use the different ferry-lines and excursion-boats as a means to study the material from various angles, not omitting, too, the bridges, both as possible subjects themselves and as vantage-point from which to work. However, at present, such advice may need to be qualified in the case of some cities by a word of caution to avoid encroaching upon military zone areas established by the government, and in case of doubt as to just what is allowable one should first apply to the proper authorities for information.

The Simplest Successful Panorama-Camera

EDWIN BLAKE WHITING

TO make a reflex-camera, lens and all, would be a foolish and false economy. To construct a home-made panorama-camera capable to take snapshots would be even worse, since several are on the market at a fair price.

The real photographic devotee who is willing to put up with a few limitations can have a panorama-camera that makes real pictures. The total expense should be kept under twenty-five cents and two or three evenings' work or play. A pinhole in place of a lens will make a picture that embraces an angle of from 155° to 165°, or even more, provided you use a film curved in the shape of the surface of a semi-circular cylinder. Beyond 165° there begins a gradual loss of light that reaches the film, until at 180° the theoretical limit is reached most decidedly and we begin to get into fourth dimension or to be in the position of a small boy on the wrong side of the fence at a ball-game.

Every amateur knows several landscapes that he has always wanted to make as a panorama-picture. If he will devote a couple of evenings to construct the simple box-camera with its crude yet effective curved film-support, he can have his wish gratified at virtually no expense for the camera and with entire satisfaction.

The drawing shows how to build a pinhole panorama-camera of four-inch focus, using a film thirteen inches long by either three and a fourth, or three and a half, or four inches wide. The drawing also shows a cross-section through the pinhole that takes the place of a lens. The inside dimensions of the box are five by eight inches on the "floor," by four and one-eighth inch deep or high. The film-holder—the crux of the whole affair—is simplicity itself. It con-

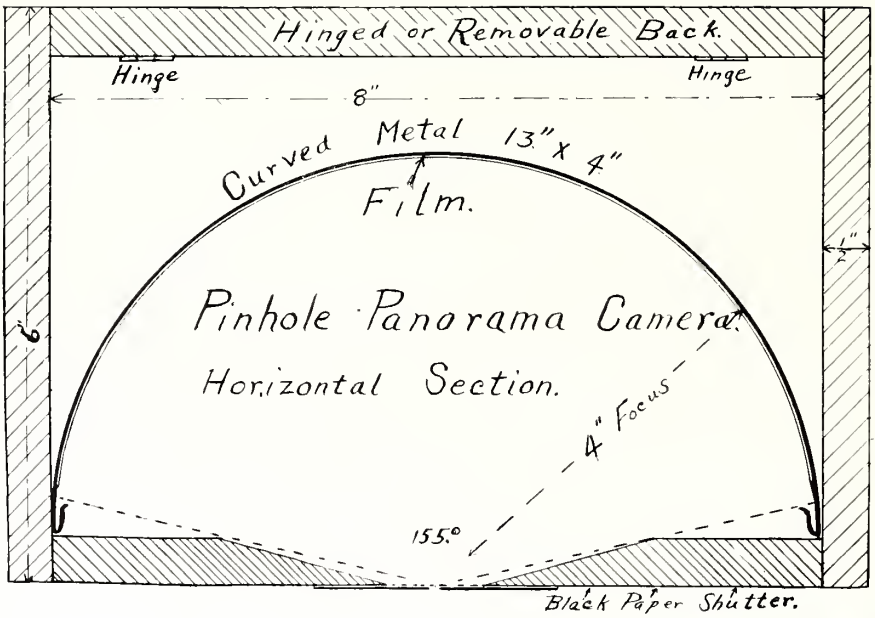


FIGURE 1 EDWIN BLAKE WHITING

sists of a sheet of flexible, rustless metal, brass, or galvanized iron, or, on a pinch, a large tin-can may be "butchered" with an old pair of shears or a can-opener and a hammer. Whatever the material, the ends must be bent back half an inch to form a groove along each end. These grooves on the inside of the curve hold the ends of the narrow three-eighth-inch strips of metal that hold the film in place along its long edges. The strips of metal are a trifle shorter than the large metal-plate or sheet when it is flat. The plate is held down flat and the film placed in position on it, then the narrow strips of metal are slipped under the grooves in the end and just over the long edges of the film. When the metal-sheet that holds the film is bent smoothly in a semicircle to go in the camera, the metal-strips "stub" on the end-hooks and bind the film in place like a vise. The pinhole is now at the center of the semicircular film. The camera may be filled with ordinary roll-film cut the proper length or the more economical and easier to handle portrait-film may be cut from large sizes. The portrait-film keeps remarkably well. The writer has made negatives of perfect quality and strength from portrait-film over two years beyond its expiration-date.

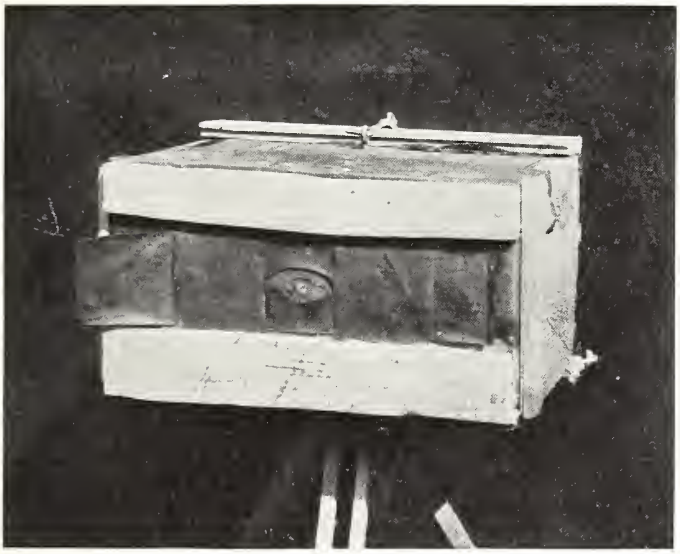
If the dimensions given in the drawing are not exactly your idea of what a panorama should be, here are the formulæ which enable you to figure how big to make your box to get, either a given length of film, or to get a given focus. Assume a true cylindrical shape for the film, then

Let L = length of film
R = radius or focus
Then for the semi-circumference $R = \frac{L}{\pi}$

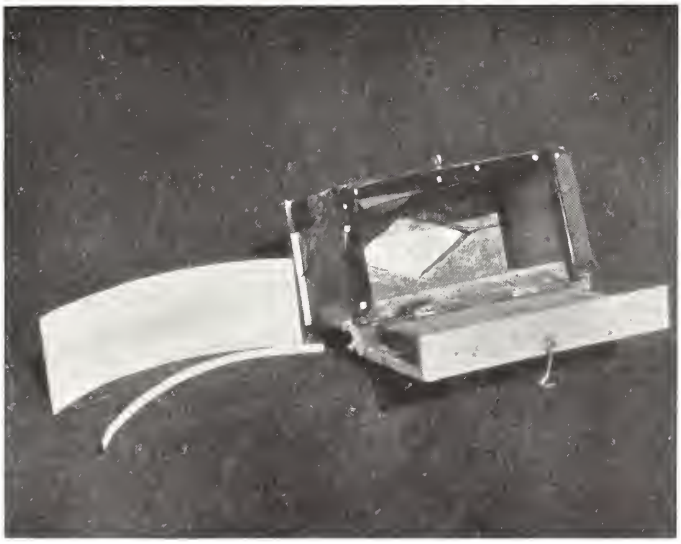
and $L = \pi R$

This shows that a ten-inch focus would require over thirty inches of film. If you plan too grandly for a long focus and large image, your film will cost a small fortune. Remember that the time of exposure increases as the square of the distance of the film from the pinhole. With a No. 12 needle-hole and a four-inch focus, the exposure required varies from one to six minutes, according to the subject and the time of year. This focus gives contact-prints that will fit in albums and the occasional gem can be enlarged commercially for less than large size film paper would cost.

When you make the pinhole, allow half an hour's time and work near a strong light with a magnifying-glass handy. A thin sheet of brass or copper works easily and the resulting pinhole should last for years. This piece of brass need not be over two inches square. If you have provided only one such plate, make several pinholes along the extreme edge or in the corner for prac-



Front View



Back View

PINHOLE PANORAMA-CAMERA
EDWIN BLAKE WHITING

tice. Then make one where you want it in the center of the square. With a metal-drill start a hole; but be very careful not to punch through. This thins the metal down gradually toward the center where the pinhole is to be and raises an eye on the other side. From time to time, as you drill, try to punch the point of a fine needle through the thinnest place; but do not force it. The needle will virtually drop through when the proper thinness is reached. A nail will do in place of a drill, if you file or grind off the "boss" raised by it till the metal is thin enough to allow the needle to punch through easily.

The actual definition in the picture will be determined very nearly by the size of the pinhole. So it is well to use only the point of the needle and to get a smooth, round hole as small as possible. A match-flame will blacken this hole sufficiently, if other means are not forthcoming. In building a light-tight camera-box, make free use of strips of an old black stocking or, if you have a taxable income, use black velvet-ribbon. This enables you to use rough lumber and saves a lot of time. The inside of camera may be blackened with stove or shoe-blacking or with ink.

For development of the film, you do not need a dish as long as the film, provided you do not mind losing a quarter of an inch from each end. Run a good-sized safety-pin in along the end of the film. By using the good old see-saw method, a small dish—the width of the film—will answer with a great saving in developer. First, wet the film thoroughly in a large deep pan of water to avoid streaks or bubbles in developing. With roll-film a tank may be used economically, if you care to take the trouble to pin several exposures together. Panoramas on portrait-films are too long for the rack of the film-pack tank. But a film twelve inches long of the stiff sort, like the portrait-film, may be bent in the form of a cylinder and placed sensitive side inward in a dry tank four inches in diameter or over. Its black paper must go in with it to prevent sticking to the tank. A 5 x 7 tank will take two cut-films 3½ x 12. The same developer can afterwards be used to develop a dozen ordinary films or plates if given twenty per cent more time.

To print these long negatives, all you need is a piece of glass larger than the negative, a pad made of anything—a folded towel—and for developing-paper, a board the length of the film. For printing-out paper, which is easier to cut in strips and to handle in the solutions, saw about three inches off the board. When printing, clamp the longer piece of board to the glass in the simplest way you can devise. The short piece may be clamped or even held in place by hand and it gives a means to examine the progress of printing. One picture at a time between visits to the darkroom may seem at first sight a serious setback in the direction of art; but things work the other way. When one can make only one picture at a time, the important elements of prayer and fasting go into the picture with proportionately cheering results.



THE RANGE *Made with pinhole panorama-camera* EDWIN BLAKE WHITING

Since the position of the pinhole on the front of the camera determines the amount of foreground and of sky, and since the panorama-camera must be strictly level, to get control of our foreground and sky, it is a good plan to place the pinhole off center vertically, say five-eighths of the distance from top to bottom of the camera-front. Then, by using the camera either side up, we get more sky or more foreground as we desire.

Pencil or chalk-lines ruled on the outside of the box make a remarkably accurate finder. You level the camera and then sight along the lines which go parallel to the imaginary lines the

light takes to reach the film. Those on the side of the camera giving "the up and downness" are important and should be carefully drawn.

The camera described is made for use. A minimum cost both in labor and cash precludes any intrinsic beauty in the artist's instrument. The writer realizes that a home-made panorama-camera could be constructed with a roll-film magazine and red window for numbers and an autographic back. There would be considerable difference in the labor-cost; but you could never tell the difference between the pictures taken by the latter from those taken by the simple one described above.

The pinhole limits us to stationary subjects or to people who can pose for a minute or more; but it is a diffusion-lens *de luxe* which gives a landscape that indefinable softness so sought after by pictorialists. The panoramas made with a pinhole may seem a trifle diffused to one who has been using an anastigmat; but in after-years he will love the delicate diffusion and quaintly perfect perspective of the pinhole-panorama long after many of the sharper pictures are forgotten.

Fixing and Washing Negatives and Prints

IN the making of a photographic picture there are a number of separate operations, beginning, shall we say, with exposing the plate, and finishing with framing the mounted print. These one may compare roughly with the links of a chain, whose strength, we are told, is measured by its weakest link. Now it is natural—i.e., human—to pay less attention to operations easily performed than to those of greater difficulty. Thus it comes about that the fixing and washing of plates and papers is often conducted with insufficient attention—not to say sometimes scamped—and with dire results. It may, therefore, save some disappointment and irritation if we once again go over the ground with a view to pointing out some of the not unlikely stumblingblocks.

Starting with a dryplate, we have a sheet of glass coated with a mixture of gelatine and some silver bromide, which is virtually white. A brief exposure does not change this in color, but only in its nature or affinities, such that the developer—where light has fallen on it—changes the white silver bromide into black silver—without the bromide part—giving us our "negative"—or black and white inverted—image. This we want to keep on the glass, while the unused and now not-wanted remaining white silver chemical is removed—dissolved—or "fixed," as we say; i.e., we *fix the image* only by taking away the non-image part. For this purpose we use "hypo," or hyposulphite of soda—another misnomer for what should be called *thiosulphate* of soda—literally sulphur sulphate, *theion* being Greek for sulphur.

Now in making up a fixing-bath this "hypo" is *the* one thing essential. We can quicken its action by adding ammonium chloride, etc.; we can guard against its becoming discolored by adventitious developer, and so keeping clear and clean-looking, by the addition of various things, e.g., acid sulphite, metabisulphite, and so on; we may add things which cause it to harden the gelatine as well as "fix" the silver, and so forth; but with or without these additions it is the hypo, and that only, which does the business of fixing the plate. That is the rock-bottom fact of the whole business just now under consideration.

It goes without much saying that the hypo has to be dissolved in something—water for choice—in order for it to get inside the gelatine-coating or film. Having got in and dissolved the silver salt we have to get rid of it—by water.

It is natural to guess that the stronger the solution the quicker it will act—which is, however, only true up to about forty per cent, or four parts of hypo in ten of solution. Stronger than this acts more slowly. We all know that too many workmen can be crowded on to a job and get in each other's way. Perhaps it is something like that. General experience and convenience in various ways point to a preferable strength of about twenty-five per cent, or say a pint of hypo crystals and three pints of water, and other quantities in these proportions. It is of practical importance to note that adding hypo to water causes a fall in temperature—making up a solution of the strength just indicated will cause a fall of something like 10 degrees F.,—so that it is advisable to start with water about 70 to 75 in winter-time, and thus by the time the crystals are dissolved the mixture will be between 60 and 65 degrees F., which is just right for comfortable use. Note further that the colder—or warmer—the slower—or quicker—this fixing-solution acts. So that we cannot say merely that such a strength will fix a plate in so many minutes. Also at the same temperature and strength two plates of different brands—side by



Official Canadian War-Pictures

OVER THE TOP — CAPTAIN CASTLE

side in the same dish—quite probably will take different times to fix.

But how is one to know when a plate is fixed? What is the sign? Unfortunately we can *not see* when a plate is fully fixed, but fortunately we can see when it is half way to that goal.

The operation of fixing is what has been called a two-step tune—like changing a treasury-note into silver, and then changing this again into copper. Disregarding long chemical names, we may say that hypo and the silver bromide of the plate form a compound A, which in turn is changed into another somewhat similar compound B, *if* there is plenty of hypo in the bath. Now B is easily washed out with water, but A is not to be got rid of easily in that way. In fact, the more water you offer A the less it likes it. The end of the story is that if there is not enough hypo to change A to B, some A is left behind, and this, sooner or later, makes its presence recognized by spots, patches and stains.

Now suppose you start by dissolving 1 oz. of hypo in 3 oz. water, and in this "little lot" you go on fixing plate after plate. Every plate put into this bath uses up, throws out of action, some of the hypo with which you started. Consequently there comes a time when A is formed slowly, if at all, and there is not enough hypo left to convert A to B. It is therefore obviously very bad policy to overwork the fixing-bath.

How are we to recognize the danger-limit? If you place a plate in a fixing-bath, and keep looking at the back—bare glass-side—frequently you will observe that in x minutes the milky appearance begins to show less and less, and in y minutes the milky appearance is quite gone. Is the plate now safely fixed? Probably not. What we have been watching is the formation of A. If the bath is fairly strong and fresh, no doubt the formation of B has also been going on as well, but this we cannot see. If, however, we note the time, say five minutes, that it takes to remove all milky appearance from the plate—formation of A—and allow as much time again for formation of B, i.e., ten minutes all told, we may feel pretty sure that we are safe.

This sounds all right for a new bath, but what about one that has been in use for some time? Again we can apply the time of milky clearing-test. If a bath takes much over ten, or say twelve minutes to thus clear the back of a plate at 60 to 65 degrees it is unwise to go on working it. It *may* or it *may not* be working safely, but the risk is not worth the cost. It is cheaper to

use another few cents worth, i.e., a quarter of a pound, of hypo than to risk spoiling one plate.

For these test-plates we can use any odd plates which are age-stale or light-fogged, provided that they have not been exposed to light for a considerable time. These may be cut up into pieces somewhere about an inch or so square and kept in an ordinary cardboard plate-box. A plate that has been smashed accidentally may afford fragments that are of usable size. These test-plates should not have been developed.

There is, or was, a common notion abroad that a fixing-bath for prints should be of much less strength than that for plates. Formerly it was found that some papers yielded blisters after a twenty-five per cent hypo-bath, but now this trouble is seldom met with after such a strength as twenty-five or, perhaps safer, twenty per cent. Higher strengths than this may be risky.

Unfortunately, we cannot *see* much change of the print during fixing, although with some brands the print seems to brighten up a bit, but not enough to be any guide. But still we can, with our test-bits, get a useful idea as to the speed or working time of the bath. Naturally, a print does not require so long a time in the bath as does a plate—or film—seeing that our good friend hypo can enter and depart by both the back door and the front; a solution of this kind very quickly passes through paper, but not quite so quickly through cardboard.

When putting two or more plates into the same fixing-bath care must be taken not to let one plate overlap another even for a quite short time, or a mark may be expected. With regard to prints, care must be taken to avoid letting any two prints cling together and so hinder the entrance and exit of the hypo. Hence the prints should be moved about and turned over frequently, and the dish also rocked from time to time. Experts tell us that prints need not be left in a ten per cent hypo-bath longer than five minutes——if they are properly attended to during this time. So that five minutes with twenty per cent and frequent turnings will see us safely through this part of our journey. Most plates will clear in about five minutes in twenty per cent hypo at 65 degrees F.

First bear in mind that no washing, however long and careful, can make up for deficient fixing. It is often said that more plates and prints are spoiled by faulty fixing than faulty washing. *The best hypo-eliminator is plain water and plenty of it, continually kept on the move.* In this one sentence you have the gist of the whole science and art of washing. Experiments demonstrate that a film at rest in plenty of water parts with half its hypo in two minutes. For example, a film saturated with twenty per cent hypo placed in water will in two minutes be saturated with ten per cent. Again changed to plain water, in another two minutes this will be five per cent, and so on. Starting with twenty per cent., in twelve minutes the strength is 1.56 per cent, or say about six grams hypo per ounce of water. But if it is in a lively stream it can be practically freed of any harmful trace of hypo in five minutes, or in ten minutes in a gently flowing stream, and the prints kept on the move.

If dish-washing be preferred, half a dozen consecutive bathings of five minutes each will see us into safety. Now, about dish-washing, one important point is to use two dishes, if possible, and to rinse out the dishes after every change. Also to drip and drain each print well with a bit of a shake to get rid of as much surface fluid as possible with each change of the print from one dish to the other.

With tap-washing, if the inlet reaches the bottom of the dish the outflow may be at the top, or if the outflow be at the bottom the inlet may be at the top; but it is next to useless to have inlet and outlet both at the top unless the whole volume of water in the dish be kept continually and briskly on the move.

As in fixing so in washing, the prints must not cling together, or the water cannot get in to turn the hypo out. If a round dish be used, often the prints will herd together in the middle and scarcely move. This may be prevented by standing a round bottle or small gallipot in the middle.

A splashing inflow must be avoided. Not only is a forceful stream of this kind likely to mechanically damage the prints, but also it carries air bells into the water and on to the print which in turn may result in spots. Blisters also are encouraged by splash-washing. On the whole a gently flowing stream and steady motion of the print is the course which offers most advantages.—*The Amateur Photographer.*



What Significance Has a Direct-Positive Process?

JOSEPH RIEDER

THE first practical photographic process, the daguerreotype, gave a positive picture. That was in one respect an advantage, since it meant a saving of labor in contrast with the roundabout method of making a positive by means of a negative. Nevertheless, the negative process was rightly considered an advance, for the advantage of a direct positive picture was more than counterbalanced by a number of drawbacks. Every single daguerreotype is unique, since it can be reproduced only by really complicated methods. If a good picture is not obtained, it must be considered as entirely lost; whereas with a negative some improvement is nearly always possible. Besides, the small defects of which the positive is never free, must be corrected in each individual picture, whereas on the negative these need only be retouched once. The negative process allows facilities for retouching that are lacking entirely in the daguerreotype or in any other direct-positive process. It is true that this last advantage can be turned into the contrary if used without discrimination, by running up a lengthy bill for time and "artistifying" the picture to such a degree that it can no longer be called a true reproduction of the subject. Every retoucher is not an artist in his line, and many of these "improvers" simply botch their work. However, the misuse of technical improvement is not limited to photography, and the transition from the direct positive to the roundabout negative has nevertheless been a great improvement.

But one question will surely present itself: Does the negative process fulfil to-day all the demands made upon it by modern photography? Is it entitled to control the field exclusively? Would there not be a wide field for a practical direct-positive process—for a process, understand, that is technically complete and, especially, that will permit the shortest exposures?

Generally speaking, according to the customary view, such a process can scarcely be counted among those for which the world is anxiously waiting. On the contrary, the opinion appears to prevail that at the most it might be useful for photographers at country-fairs who in part, even to-day, use a positive process—the ferrotype—which certainly gives fairly good results. In this, however, only an apparent positive is produced, in which the light silver-image rests on a black foundation specially prepared on metal.

Of course, these photographers and a host of others at all kinds of pleasure and health resorts, mercantile houses, etc., would welcome such a process with delight. If they could furnish faultless rapid photographs at a low price—provided that such a paper would not be much dearer than the old bromide paper—improvements in the construction of apparatus might really bring about this rapid photography. One can readily imagine that some arrangement similar to the kinematograph could be devised that would furnish as many snapshot-pictures, one after another, as the customer wants. The development and other subsequent operations could be done easily and quickly by an automatic attachment, so that rapid photography in the truest sense could be effected. Indeed, should such a technical improvement become available to professional photographers it would greatly prejudice those others who look upon our still imperfect rapid photography as a disagreeable competitor. But this prejudice would be counterbalanced by the fact that those studios that would be willing to make use of such an auxiliary would have at hand a new source of business. If to-day a customer wants a large-size picture—let us say, 18 x 24 inches—we would very rarely make a negative of that size, but would rather, as a matter of economy, make an enlargement from a small negative. Positive paper, on the other hand, would permit taking the positive directly in any desired size and of a quality that the present negative process does not permit. The disagreeable enlargement of the grain would be avoided and retouching would be reduced.

It would also offer advantages not to be despised for technical objects of the most varied description. So, too, in making photographic copies of documents, it would be a decided advantage if a positive could be made at once. The use of photography for military purposes would also be greatly facilitated—one needs only to think of the millions of prints made for passports in which the negative is superfluous.

And how would it be for the amateur? What would a direct positive have to offer him? A distinction must be made between the earnest worker, who has acquired good technical skill, and the snapshooter. Undoubtedly, those amateur photographers who desire nothing more than a passably good record-picture would greet a positive paper with joy. Their work would be lightened and greatly reduced in cost and the

circle of amateurs would become correspondingly enlarged to the joy of the paper- and camera-makers. But the earnest workers would also gain—if they could only use direct-plate positives as diapositives, and also, if desired, make copies or enlargements from negatives as at present, because he would have a paper capable of making one positive from another.

In any event, the invention of such a material for making positive pictures and copies would have a far greater influence on the further development of photography than otherwise.

Unfortunately, we have not got it. In view of our present experience, does it seem likely that something of the kind will come? We know that the silver-bromide coating, when strongly overexposed, is inclined to reverse the image; but this does not occur with absolute certainty, and opinions in explanation are widely different.

We will suppose a silver-bromide coating exposed exactly to the point of reversing the image: theoretically, any further exposure of the coating should emphasize more or less the effect. We would thus obtain a positive picture because those parts that are most acted upon by the light become the most transparent. But the regulation of the first exposure is much too uncertain, and, besides, we would have to deal with a too insensitive material to obtain an impression.

By this method, it is probable that nothing practicable can be produced; but it is quite possible that a highly sensitized coating of silver-bromide can be precipitated by chemical means in such a condition that it can be given a black surface by development without exposure. There are plenty of such media, of which an impereeptibly small quantity is sufficient to produce the result desired. Could such an agent be compounded, whose action would be suspended by a very weak light-impression, we would have in principle the means to produce a suitable positive material In reality, we do not know of any; but the possibility of discovering such an agent is not excluded, and the prospect of such a result increases naturally when it is systematically sought for. But it will come about all the sooner, the more investigators are convinced that here lies a fruitful field for their labor. Our present negative process is surely not the only correct photographic method that can be devised, as a great many persons think; and a direct-positive material would at least be a valuable addition to our present photographic equipment and technical knowledge.

Pictorial Possibilities in Sharp Negatives

WILFRED A. FRENCH

IT is not without a feeling of regret that the pictorial worker looks back on the days of his early successes—the days of sharp definition. In degree, his enthusiasm was fully equal to that of the most distinguished salon-exhibitor of the present day. Indeed, it may be said to be incomparable; for those were the days when amateur photography was more of a novelty than at present, when the dryplate was in its early stages of development, and ferrous oxalate was the favorite developer. The equipment used by the average amateur of that period was heavy and cumbersome, commensurate with the size of his plate, which was 6½ x 8½ or 8 x 10. The automobile was not in general use in 1880; and, while the amateur, content with a 5 x 7 or even a 4 x 5 plate, would strap his correspondingly light outfit to his bicycle and speed away in search of pictures, the owner of the ponderous equipment would have to submit to a long and tiresome railway-journey, followed by a fairly comfortable ride in a narrow top-buggy or a bouncing buckboard, and, perhaps, a wearisome tramp, before he had the satisfaction to set up his tripod. But it was all a part of the sport.

With infinite pains he focuses the image, remembering that every leaf, the bark of each tree every blade of grass must be clearly defined—indeed, every object throughout the picture, even to the horizon-line, must be critically sharp. To attain this laudable object, he stops his lens down to F/32. With the aid of a pocket-magnifier he now examines the ground-glass image in the center, up and down, right and left, also each of the four corners and, if not satisfied with the definition attained, he does not hesitate to insert stop F/45. He has no exposure-meter, so he relies on his judgment which is generally accurate. He uses a Carbutt B plate (a slow emulsion) which possesses considerable latitude, so that a second more or less, in the exposure, does not matter. Six seconds is the time he has allowed for his picture. But a breeze begins to sway the branches, the leaves begin to stir. Strange; when he arrived on the scene, even while he was

focusing, everything was quiet and serene, and not a breath in the air. But now? With watch in one hand and bulb in the other, he waits patiently. The sun is shining; the light is just right. Intently he watches the quivering leaves of the nearest tree. Slowly the commotion dies down, the auspicious moment is at hand. The fingers press the bulb—"One, two—." Suddenly the light grows dim, the shadows disappear. What is the matter? Looking towards the sun, he sees that a large, dark cloud has crept up and is obscuring the orb. Strange that he hadn't noticed any clouds in the sky when he adjusted his camera. Nothing to do but to wait till the sun is clear again. After waiting fifteen minutes he is overjoyed to see the shadows reappear in his picture. He rises to reach for the bulb, when—drat it!—the breeze springs up again, causing a disturbance among the trees and the tall grasses in the foreground. After a long and tedious wait, patience is rewarded—the sun reappears, everything is still. The plate is exposed, at last! A few moments afterwards, the treacherous sun again disappears behind a cloud, the leaves begin to rustle, indicating the arrival of another breeze; but our amateur has had enough and he is soon on his way home. The picture is a success. Like many others that he has made—triumphs of subject, composition and technique—it is admired at the camera club. His lens, a Ross Rapid Symmetrical, comes in for a large share of praise. At the local exhibition of industrial arts, a few months later, he captures the gold medal; in fact, he has won many similar honors, at home and abroad, and his name has become a household-word in photographic circles.

Time went on; but his interest in the pastime never flagged. Unfortunately, opportunities to indulge extended camera-outings grew less and less with increasing business-responsibilities, family-cares and household-expenses; but by retaining his membership in the local camera-club and continuing to subscribe to a standard photographic magazine, he kept alive an interest in his hobby. He attended occasionally a print-exhibition and noted with mingled feelings of wonder and approbation the development of the new photography; but he expressed contempt for the distorted impressions and morbid abnormalities that passed for pictorial photography, though he felt the need of progress in artistic interpretation and breadth of treatment. He was quick to recognize the originality, power and beauty of such master-pictorialists as Horsley



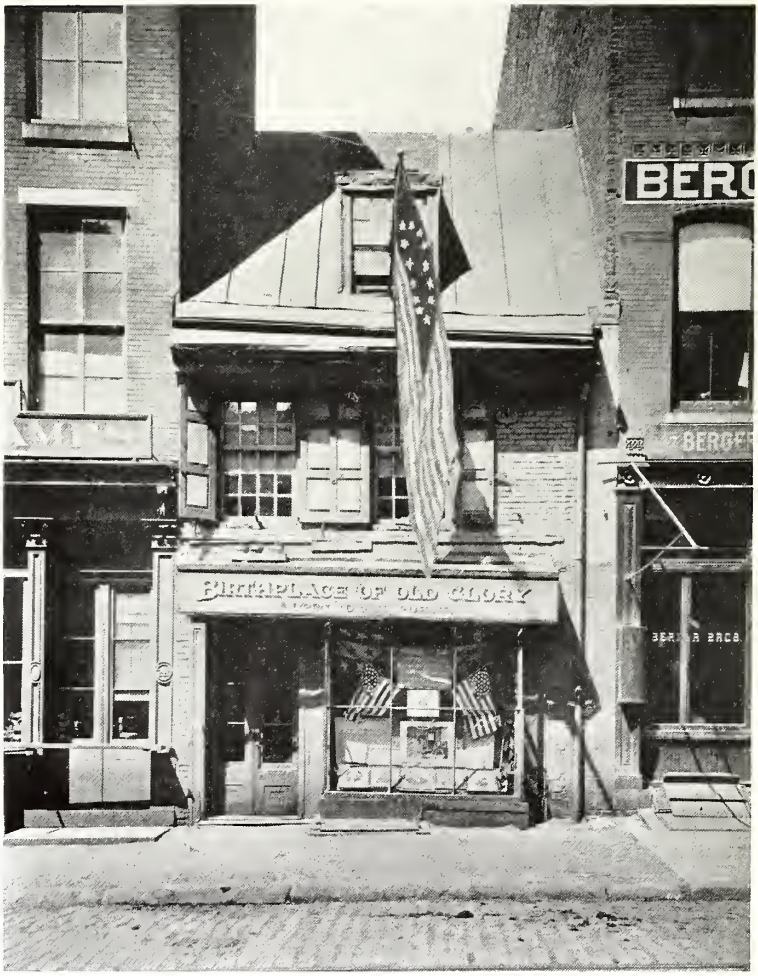
TWILIGHT-SPECTRES (*Contact-print*) WILFRED A. FRENCH



TWILIGHT-SPECTRES *(Diffused-enlargement)* WILFRED A. FRENCH

Hinton, Alexander Keighley, Archibald Cochrane, Charles Job and J. Craig Annan. To study, understand and feel the influence of their noble creations was to him pleasure and education, though circumstances prevented him from developing his own artistic individuality. He was often overcome by a desire to prepare a picture along modern lines of expression and treatment for the members' annual show at his camera club, but was unable to spare the time from his daily business-routine to go in search of picture-material, and holidays claimed his time for the performance of other important duties. He had entirely forgotten his collection of negatives of thirty years ago. It never occurred to him that they were still available. To be sure, prints from these very plates—real pictures in their day, proudly bearing his signature and worthy to be framed—no longer adorned the walls of his home, or served as Christmas-presents or wedding-gifts. But the original negatives—where were they? Stored away in the cellar, or in the attic, and waiting to be disposed of as old glass.

Do not wait, hesitate, delay! Bring forth the time-worn negatives and see in what way they can be utilized. Take, for instance, the negative of one of your prize-winning pictures of 1880. True, it is microscopically sharp, almost painful in its realism. What does that matter? With the aid of a modern soft-focus lens you can make an enlargement, easily and quickly, that will convert the disagreeably sharp definition into a pleasing and uniform softness of delineation and suppression of intrusive detail that is akin to a natural atmospheric effect—logically and convincingly artistic. If not equipped with an enlarging-apparatus and desirous to see what can be done with one of your old, sharp negatives of a pleasing theme, send it to one of the several photo-finishers whose advertisements appear in PHOTO-ERA and specify what degree of diffusion you prefer. You will be amazed and charmed with the result. The writer has illustrated his point with one of his own $6\frac{1}{2}$ x $8\frac{1}{2}$ negatives, made about thirty years ago. The first picture represents a contact-print on gelatino-chloride paper (1890); the second an 11 x 14 enlargement produced with the aid of a soft-focus lens (1918).



Betsy Ross House, Philadelphia *Copyright, Detroit Publishing Co.*

The Fabric

THE fabric of our flag was spun
From more than simple thread,
'T was woven from the hearts and hopes
Of our heroic dead;
Its blue field proves their constancy,
Its red their sacrifice,
Its white the Faith for which they died,
And nobly paid the price.

Its stars were plucked from Heaven's vault
And stitched upon the blue
As shining lamps of Liberty
To light the whole world through.
God blessed the shuttle as it sped
To warp and woof entwine,
And Love, by deft and tender touch,
Completed the design.

'T was Freedom snatched it from the loom
For Liberty to bear,
As banner, pledge and star of Hope,
To mankind—everywhere.
All that we are, or hope to be
Is woven in its folds;
The glory of our Nation stands—
As it alone upholds.

The fabric of our flag was spun
By those who lived and died
That we might have that liberty
For which they Fate defied;
And we, if of their breed and blood,
Must strive, with every breath,
For those that follow after us,
Yea, even unto—death!

WILLIAM LUDLUM, JR.

EDITORIAL

Summer-Shadows

THESE are the days of the lengthening shadow, the shadow that enhances the landscape, the well-kept lawn, the country-road. The shadow of a favoring tree gives character to the monotonous foreground and stability to the pictorial design. The appearance of a stretch of road, in the city or in the country, is saved from dullness by the addition of shadows of neighboring objects such as trees, bushes or a wooden fence. What clouds are to an empty sky, shadow-forms are to dreary spaces in a landscape. Neglect to keep in view this seemingly unimportant feature has left a conspicuous void in many an interesting but incomplete composition. Who has not seen—or has, himself, produced—a view of a street or road with trees on each side but with no shadows to relieve its uniformly sunlit and uninteresting surface? Such an inartistically symmetrical design could have been easily avoided, had the camerist chosen the time of day when the trees of either side were casting their shadows diagonally across the road. Then, the picture which before was divided into two separate parts, would appear as a united and solidified composition.

When photographing with the sun virtually facing the camera—above or slightly to one side—striking and beautiful *contre-jour* effects can be obtained. The shadows on the ground will follow the direction of the sun; they can be long or short, strong or faint—just as has been predetermined by the camerist. A picture of a hillside with trees, a meadow, a garden or a terrace can be made pictorially more attractive with the addition of oblique shadows. The camerist has merely to plan his composition, taking into account the course of the sun, and choose his light. Or, he can examine his picture at times when the sun is either high or low, and whether its rays are strong or faint. His artistic taste will determine the character of the shadows to be included in his picture.

The surface of a stream or a pond may often be beautified by the shadowy forms of nearby trees, whether the trees, themselves, are in the view or not. When choosing a massive tree-trunk in the woods for a pictorial theme, it may be well to look around for any neighboring branches or smaller trees whose shadows might be needed to increase the pictorial interest. In figure-composition, shadows often play a conspicuous part. With the sun facing the camera, single figures or small groups yield shadows that unite them closely with the ground on which they are standing, and the more diagonal the course of such shadows, the more satisfactory the result. Of course, the careful camerist, when photographing with the sun behind him, will avoid marring the foreground with his own attenuated shadow.

Pictures of architectural subjects may be frequently improved by shadows of the right character. Indeed, the artistic effect of obliquely falling shadows on brilliantly lighted buildings that are marked by projecting cornices, gables, balconies, window-sills, mouldings or sculptured ornaments, cannot be overestimated. A building with a decorated façade facing west, for instance, gets the benefit of the sun just after it has crossed the meridian, when, as if by magic, the architectural projections cast their elongated shadows, which, as the sun inclines towards the west, change in length as well as in form. A structure that faces the east or the south, but not the north, receives the sun from another angle, and it is, therefore, important to observe the appearance of the shadows caused by the various projections, in order to determine the exact hour of the day that yields the most pleasing effect of light and shadow. In photographing buildings of elaborate design, such as churches, museums and libraries, it is well that the photo-pictorialist proceed deliberately, for in the case of wealth of architectural detail it may be preferable to choose a diffused light in order to avoid the confusion that is likely to result from a multiplicity of shadows. When the photographs of a building, of whatever architectural design, are intended for the architect, it would be desirable to ascertain his wishes with regard to the presence or absence of shadows on the structure. Many private residences and summer-cottages have flowering vines, like wistaria, growing up on the sides, which cast pretty shadows in response to the oblique rays of the sun. Nearby shade-trees may also aid in relieving bare spaces of possible monotony. The camerist desirous to omit nothing that may add to the interest and variety of his pictures, will consider the pictorial possibilities of the accessories which are made available through the kindly auspices of his chief collaborator—the sun.

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, or artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Rainy-Day Pictures Competition
Closed April 30, 1918

First Prize: None awarded.
Second Prize: S. L. Burgher.
Third Prize: G. W. French.

Honorable Mention: Dr. H. C. Cowles, J. T. Dimbleby, Louis A. Dyar, F. M. Ingalls, I. C. Scase, G. R. Smith, W. Stelcik, Charles Trefts, Robert Wood.

Subjects for Competition — 1918

"Miscellaneous." Closes May 31.
"The Spirit of Spring." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Flashlights." Closes December 31.

1919

"The Spirit of Christmas." Closes January 31.
"Still-Life." Closes February 28.
"The Spirit of Winter." Closes March 31.
"Rainy-Day Pictures." Closes April 30.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Permanent Labeling

A BOTTLE can be labeled easily and permanently by painting on it in the desired place an oblong in white paint or enamel. The painting can be done roughly and the edges trimmed by wiping with a pointed piece of wood covered with a thin rag. When the paint is partly dry, the surface may be scratched away with a hard pencil in the form of the letters required, and the bottle then left for the drying to finish. I have labeled many in this way, and have found the method very successful, as paint is not readily affected by most photographic chemicals.—J. MATTHEWS, in *Photography.*

SECOND PRIZE
RAINY-DAY PICTURES



"IT'S RAINING" — S. L. BURGHER

Advanced Competition—Shore-Scenes Closes August 31, 1918

THERE is something indescribably fascinating about shore-scenes. It matters little whether one approaches the shore of a pond, lake or the mighty ocean itself—an irresistible, siren-like spell seizes the beholder. There appears to be a peculiar psychological effect produced on the nature-lover standing near a body of water. The artist and camerist share this sympathetic appreciation and love of ponds, lakes and the sea. Not in years has PHOTO-ERA been able to present this subject so beautifully as it did in the June 1918 issue which contained the exquisite prose-poem, "The Lake," by Frederick B. Hodges. Although Mr. Hodges' article was not written with this competition in mind, it would be of benefit to all contestants to read "The Lake," for it is a literary as well as a pictorial masterpiece.

In considering shore-scenes, it should not be inferred that these must be confined to the shores of the Atlantic or of the Pacific ocean. On the contrary, exquisite bits of shore may be obtained near most large lakes and ponds. In fact, salt-water effects, resembling closely those to be seen along the Atlantic seaboard, may be obtained about the shores of the Great Lakes. Under the same general heading may be included carefully selected views of wharves, shipyards and general waterfront activities, *providing* that they in no way violate the U. S. Government regulations.

Without a doubt, the "toilers of the sea," as many call the fishermen, offer some of the best subjects, whenever it is decided to include figures. Although the fisherman mending his net is virtually a threadbare theme, there is still the opportunity for some pictorialist to create a masterpiece. Likewise the old veteran "deep-sea salt" with pipe in mouth and square-cut gray beard has been done again and again; but here, too, there are still possibilities. Two old cronies spinning yarns of the days long ago may make a picture; however in this competition it is not genres, but shore-scenes that are required. All figures that are introduced should be subservient to the shore-scene depicted.

A boat just in from the fishing-grounds offers an excellent opportunity. The heaps of gleaming fish, the men at work cleaning, salting and packing them, and the schooner herself lying lazily at the wharf drying her sails—all combine to make a picture that may be made



BOYS WADING S. H. GOTTSCHO

a joy forever. Again, this same boat just before she puts to sea, portrays still another side of the fisherman's life. There is an element of pathos about this scene that smiles and hat-wavings cannot subdue entirely. Of course, the ship's company will all return safe and sound, but—!

At the present time shipyards that two years ago were rotting in the decaying splendor of past achievement, are scenes of feverish activity. An American merchant-marine, second to none, is in the making. Wooden ships are again on the ways, and old-time shipbuilders are returning to their trade with an enthusiasm that is contagious. These scenes and activities offer unlimited possibilities; but in no circumstances should their portrayal be attempted without due regard to government regulations. The towering skeletons of steel and timber suggest the bones of some pre-historic mammal; but notwithstanding, they are picturesque—particularly, if photographed at dusk or at some time of day when unusual lighting-effects may be obtained.

The natural beauties of the shore itself are usually the most attractive. There are many interesting and artistic subjects in shore-scenes that depict man-made activities; but, after all, the most artistic and thoroughly satisfying pictures are those which show nature— shore, sea and sky—untouched by the hand of man. The rocky headland, crowned by an old storm-tossed evergreen that appears to strain against the gentlest summer-breeze as tenaciously as it does against the fury of the winter-blast, offers a subject that under favorable weather-conditions may be made to suggest storm, wind and jagged reefs upon which many a good ship has come to grief. The addition of two or more figures, suggesting watchers ashore, might add to the melodramatic appeal of the picture; but on the whole, anything savoring of "made-to-order" accessories should be avoided.

One summer, several years ago, I spent a few days on the south shore of Long Island, New York. The particular town I visited faced the open Atlantic. As far as the eye could reach, sand-dunes, tufts of grass, snow-white breakers, gnarled scrub-oak and pine comprised the landscape. On a particularly beautiful moonlight-evening I strolled alone down the beach to a wreck of a schooner embedded in the sand. The tide was coming in and, as I watched, the giant "rollers" crashed into and over the wreck as if trying to tear apart what remained of their victim. The black hull and shattered spars silhouetted against the moonlit sea, offered pictorial and dramatic appeal enough to stir the beholder to the depths. With care, preparation and technical skill, such a scene could be reproduced successfully—and what a picture it would make!

Of perennial interest are the youngsters on the beach. By careful manœuvring so as to isolate such groups from inquisitive bathers and summer-resort spectators, two or more children with their pails and shovels may be photographed to advantage. Another interesting group to make if possible is one in which the children are about to make a first plunge into the waves. The wet sand at the water's edge acts as an excellent reflector and as such it may be used many times to good advantage. It should be remembered that all groups must be kept subservient and that it is a *shore-scene* with a group as accessory. In no circumstances waste time to portray a beach filled with bathers and summer-visitors. There is nothing pictorial or artistic about such a scene. Commercially such a picture is of value but it has no standing in this competition.

It is often remarkable what an interesting composition may be made out of old barnacle-covered piles at low tide. The pools of water interspersed with clumps of seaweed, rocks and parts of wreckage, offer the camerist excellent material. In this connection might be mentioned piers, fishing-shanties, boats left

THIRD PRIZE
RAINY-DAY PICTURES



FISHING-WEATHER GEORGE W. FRENCH

high and dry, lobster-pots, and "fishing gear" in general. The clam-diggers and their necessary equipment should not be overlooked; nor the oyster-men and scallop-hunters.

A salt-marsh contains many pictorial opportunities, particularly if the grass is being cut and the men, clad in high rubber-boots, are stacking the hay in the quaint fashion reminiscent of other lands. The two-wheeled carts which they employ often make excellent subjects. Then, again, the salt-marsh offers opportunities to obtain wonderful cloud-effects, especially if it is possible to include a bit of open sea in the composition.

In photographing sand-dunes, great care must be used to avoid producing a result which suggests a snow-covered landscape in mid-winter. White sand is difficult to photograph, particularly under a hot sun. Heat radiates from the sand and this coupled with the reflected glare necessitates the utmost attention to exposure, proper use of ray-filter, lens-shade and subsequent development. It is well to remember that a sepia print of a sand-dune picture is preferable to a black and white. The brown tint aids to give the rocks and sand a truer value than a gray tone.

Obviously, a heavy camera on a tripod is not as well suited to shore-scene photography as a lighter hand-camera without tripod. However, if the heavy camera must be used, care should be taken to carry three pieces of wood or metal to place under the tripod-legs to prevent them from sinking deeply into the mud or sand. The use of an accurate spirit-level is recommended. The outstanding advantage of the large camera is its ground-glass focusing screen which enables the camerist to compose his picture accurately and with greater pleasure to himself.

In view of the fact that we have not had a competition devoted to shore-scenes since 1913, we believe that PHOTO-ERA readers will respond with pictures of great and novel pictorial merit. By referring to the January 1914 issue, contestants will find some excellent shore-scenes. The summer-season, particularly, favors the making of shore-scenes, and many are already on the ground to obtain the best results. We feel sure that this contest will be both popular and profitable to everybody.

A. H. B.

Hooverizing on Developers

THESE are times when we are being taught practical lessons in economy, and, according to Mr. Hoover, it behooves the consumer to "hooverize" in the consumption of materials of all kinds. The amateur, especially, must practice economy in the use of photographic

chemicals. Our English friends have led the way in this respect. All issues of English photo-journals are filled with advice how to economize, in every way.

Practical workers not only curtail the use of plates and paper, but of chemicals as well, including the humble and inexpensive necessity, sodium hyposulphite. How the hypo-solution may be used before its strength has been exhausted, is explained in the article printed elsewhere in this issue.

With regard to photographic developers, let us consider hydroquinone. This chemical, like other products, has been advanced in price. The retail-price in England, at the present time, is about thirty shillings, or about $7.25, per pound, whereas it retailed at four shillings, less than $1.00, before the war. This developer is used most generally in the form of a concentrated solution by workers in England, whereas in this country it is sold mostly in powdered form. Most amateurs are tempted to purchase this developing-agent frequently, and in small quantities, but this is not an economical way to use it. When this developer is kept as a single concentrated solution in a bottle, it is obvious that, as the quantity is diminished air enters the bottle, thus causing constant deterioration and, further, decomposition and waste. A writer in an English photo-magazine recommends that, as soon as a quantity of hydroquinone developer has been poured out from the bottle the latter be immediately filled up with sodium sulphite, in crystal form. The latter chemical is cheap and easily procurable, and does not dissolve, to any great extent, when used as above. In the bottle containing the hydroquinone-solution while the developer is being used up the quantity of sodium sulphite crystals is increased until it reaches up almost to the cork of the bottle, so that the last dram of the developer can be used and none go to waste. All this time the air has been kept from the hydroquinone solution; therefore the last quantity used will be found to be virtually as good as what was first poured out.

Might we not go a step farther and make an equally practical and convenient suggestion—one entailing no expense, inasmuch as the crystals of sodium sulphite are to be used merely for the purpose of taking the place of the developer and thus prevent the entrance of vitiating air. Why could not common quartz pebbles, found in a brook or on the shore of a pond, be used?

W. A. F.

Renovating Apparatus and Accessories

Renovation is quite distinct from repair. The second deals with strength and serviceableness; the first simply with appearnace, writes A. Lockett, in the *British Journal*. As a well-known worker recently remarked to the writer: "I send my repairs out to competent hands, but I do my renovation myself." Some of the hints here given are seasonable in a double sense, as not only helping to give a good impression now that the lighter days begin to show up previously unnoticed dinginess or dilapidation, but as being real war economies.

The materials and appliances needed are of the simplest and most trifling kind. They include a short-handled feather-duster, one or two of the sharp-pointed glass-headed pins known as dress pins, a few soft rags, a piece of chamois-leather, some metal-polish, another of turpentine and beeswax furniture-polish, a little benzine or petrol, some machine-oil, linseed oil, celluloid-varnish, and various colors and stains.

The camera may first receive attention. Having removed the lens, flick the apparatus vigorously all over with the feather-duster, especially between the folds of the bellows, both inside and out. Next look for any worn or chipped parts where the color is lacking. If of solid mahogany, there will probably be none; but cheaper wood, merely stained or veneered, may show light patches. Should this be the case, mix up a little color to match the darker parts—red ink with a trace of india ink added will do very well—or for lighter mahogany a mixture of crimson lake and burnt sienna water-color—and apply it with a brush or a piece of rag, taking care to do only the portion wanted and to soften off the edges. The principle, in fact, is just the same as that of the retoucher or spotter, namely, to make the conspicuous defect disappear by matching it with the surroundings. Perhaps two applications will be necessary. Allow to dry, then polish by friction with a soft, dry cloth. Now apply the merest trace of the furniture-polish to the camera woodwork with a rag and polish off with the chamois-leather, doing each part in turn. The result is surprisingly good, and often makes the apparatus seem equal to new. On no account be tempted to use the mahogany "varnish-stains" sold for floors, etc. They are excellent for that purpose, but they absolutely ruin the look of a camera, giving it an appallingly red, irritatingly glossy aspect, and being always more or less sticky. For oak and walnut cameras, Vandyke brown water color, mixed with a little raw sienna if required, may be used.

The brasswork, if the lacquer is undamaged, will merely need a thorough rub with the chamois-leather; otherwise the metal-polish is brought into requisition. The latter is applied sparingly on a flannel with gentle friction, using a fresh portion as the rag gets dirty, until all discoloration is removed. Then polish off with a soft rag. The brasswork may be relacquered, if desired, by brushing with celluloid varnish. The rack and pinion of the camera should be cleaned out with an old tooth-brush. It may be mentioned, here, that the dress-pins are employed to pick out bits of dirt and grease in wood or brasswork which cannot readily be got at in other ways. The exterior of the bellows may be treated with a good leather-dressing.

The camera-stand, likewise, may be touched here and there with watercolor to match where portions have been abraded. It should then be rubbed over with a little linseed-oil and polished. Clean out clogged-up grease from the screw with benzine or petrol, of course away from a light or fire, wiping well. Then apply a moderate amount of machine-oil. It is wonderful what a difference this makes to a groaning and heavy-working stand. Oil the spindles of the castors also.

Studio-furniture is quite revolutionized by good furniture-polish, which should be used with discretion, however, so as not to set up reflections. For dark oak-furniture, linseed-oil is better. Accessories of the painted composition type may be touched up with a little oil-paint containing a liberal amount of turpentine to make it dry dull. White, with neutral tint or gray added, to make various monochrome-shades, will be correct. The same paint will serve to renovate worn foregrounds, or to cover up cracks in backgrounds. Try how it dries, however, before using it. If too dull, add more linseed oil; if too glossy, more turpentine. Some of the white paint may be saved to do the reflector of the arc-lamp with.

The wooden feet of background stands, etc., look well if given a coat of chocolate-color oil-paint, which has good body and covering-power, and agrees with almost anything—a fact worth bearing in mind. Trivial as these suggestions doubtless sound, the improvement effected by such means is out of all proportion to the slight trouble and cost, and must be seen to be believed.

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY

Stability of Developing-Solutions

Dr. J. MILBAUER has carried out a series of practical tests to show the degree of stability of "ready-for-use" developing-solutions. Among other things he observed the durability of freshly prepared solutions as compared with those left for some hours exposed to the air, especially with a view to determine their rapidity of reduction. The results were as follows:

Glycin with potassium carbonate	1.0
Rodinal (commercial solution)	0.9
Edinol with potassium carbonate	0.8
Adurol " "	0.6
Pyrocatechin " "	0.6
Metol " "	0.5
Hydrochinone " "	0.4
Pyrogallol " "	0.3

The figure 0.5 here indicates that development in the oxidized solution takes twice as long as in a freshly mixed one.

Another series of tests was made as to the durability of the solutions. Freshly prepared developers, in bottles containing about three ounces, with narrow mouths and filled to the neck, exposed continuously to the action of the air at a constant temperature of about 65° F., gave the following figures as the time in which the reducing-power of the developer decreased one-half:

Amidol with sodium sulphite	17 hours
Pyrogallol with sodium carbonate	20 "
Eikonogen with potassium carbonate	1 day
Rodinal (1 to 20)	3 days
Hydrochinone with potassium carbonate	8 "
Metol with sodium carbonate	8 "
Ortol with sodium carbonate	11 "
Pyrocatechin with potassium carbonate	19 "
Adurol with potassium carbonate	30 "
Edinol with sodium carbonate	30 "
Glycin with potassium carbonate	35 "

The developing-power of amidol and rodinal vanishes in 14 days; of hydrochinon, metol and eikonogen in 20 days; of glycin in 60 days, and of pyrocatechin in 100 days.

When oxidized in the air, the color of the solutions becomes darker and the tone of the prints changes—very unfavorably in rodinal, metol and edinol. On the other hand, glycin that had become almost black gave comparatively good tones.

Attaching the Vest-Pocket Camera to the Tripod

A PRACTICAL hint is given by J. R. B. in *The Amateur Photographer* with regard to using the vest-pocket camera on a tripod. Most models of the vest-pocket camera that are fitted with a bush to take the screw of a tripod-head have one drawback in common, and that is that the bush has only one or two turns of thread. This is unavoidable, as the thickness of metal of the camera-body will not permit of a deeper bush with more turns, so that when attaching these cameras to the tripod it is necessary to interpose a washer to prevent the threads being stripped in an attempt to screw too far. This washer should be the same size as the tripod-head, and preferably of some soft material, such as strawboard covered with velvet. Care should also be taken in screwing, the screw being given a turn back until a faint click is heard as the threads engage, when the screw forward is made in the ordinary way.

Serchol, the New Developer

USERS of metol in the past will remember that one of this chemical's characteristics was its power (when used as a simple metol developer) to force up all possible detail in a negative, and was thus particularly useful for brief exposures, hence its great popularity with Kinematograph workers and press-photographers. There was always, however, a tendency to fog or veil if the forcing-process was carried too far. With Serchol, however, we did not find this, and with several cases of deliberate underexposure clear, bright negatives, with no clogging of the highlights or veiling of the shadows, were produced. It was found, too, that potassium bromide used as a restrainer has a very marked effect on the Serchol developer, more so than with metol. This places an added power in the hands of the user of the new developer, which was found very economical in use. The formula used was the one recommended by the makers, as follows:—

Serchol	8 gr.
Sodium sulphite (cryst.)	130 gr.
Sodium carbonate (cryst.)	130 gr.
Potass. bromide	2 gr.
Water	20 oz.

This was excellent for both plates, films, and papers; but it was found that for the last-named, Serchol used in conjunction with hydroquinone gave much finer black tones, the prints being indistinguishable from those developed under perfect conditions with amidol. The formula used was—

Serchol	6 gr.
Hydroquinone	18 gr.
Sodium sulphite (cryst.)	130 gr.
Sodium carbonate (cryst.)	130 gr.
Potass. bromide	2 gr.
Water	10 oz.

For tank-development of plates and films it was found the above formula (using double the given quantities of sulphite of soda and water) very good, but better still both for dish- and tank-development was Serchol-pyro. This produced negatives of first-rate tone and quality, and can be well recommended.

In short, Serchol appears to be a developer upon which every dependence can be placed, and one it is hoped will take a permanent place in the photographer's developing-room, not only on account of its intrinsic qualities, but because it is asserted that it will effectually replace metol.—*The Amateur Photographer.*

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $5.00.
Second Prize: Value $2.50.
Third Prize: Value $1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous";*** but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than one year's practical camera-activity, and without any practical help from friend or professional expert. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4}$ x $3\frac{1}{4}$ to and including $3\frac{1}{4}$ x $5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition Closed April 30, 1918

First Prize: J. Herbert Saunders.
Second Prize: Albert Huegler.
Third Prize: Edward J. Williams.

Change in the Beginners' Competition

THE Publisher is fully aware that the character of this competition calls for a change. By having permitted workers to enter prints here that have never been in a competition elsewhere, he has given a generous scope and wide interest to this competition, which appears to have won general approval, judging by the number of participants. Of late, however, the pictorial standard of contributions to this competition has been of a very high order—so much so, indeed, that real beginners have been crowded out.

In future, this competition will be limited to actual beginners, but not to those who have been using their cameras only a few weeks. Competitors must have had some really practical experience in pictorial selection, developing and printing. Those who make only the exposures, entrusting the photo-finishing to others—friends or professional experts—are not eligible; neither are workers of over one year's camera-activity. Past and future participants who have won a first prize in the Beginners' Competition automatically drop out, but may enter the Competition for Advanced Workers. The three prizes, offered in the Beginners' Competition, will be continued as heretofore.

The Small Spool-Film Camera

The number of vest-pocket cameras now in use must literally run into millions, and undoubtedly the most popular are those models that take small spool-films. We have had a long experience with these minute instruments, and believe that in them the spool-film is found at its very best. With large sizes roll-film is not very suitable—say in quarter-plate and postcard—owing to a decided lack of flatness, and this is rapidly found out by reason of poor definition when a large-aperture lens is used. A tiny vest-pocket film is, however, much stiffer, owing to its relatively smaller area, and even when quite large apertures are used there is no lack of definition in any part of the negative for this reason. In small sizes, especially, it seems as if the spool-film is far more suitable than plates, owing to the difficulty in avoiding fingermarks when handling the latter in such tiny sizes. Spool-film may be loaded into the camera, and the negatives developed, fixed, and ready to wash without any handling at all of the sensitive and easily damaged film. In fact, it may be said that in our own case we do not often see the negatives at all until they are ready to hang up to dry. In this way negatives of very great technical perfection are most easily obtained, and fingermarks, scratches, fog stains and like defects, so hard, on account of mechanical difficulties in handling, to avoid, and the ruin of an otherwise successful enlargement, are unknown.—*The Amateur Photographer.*



HOME-PORTRAIT J. HERBERT SAUNDERS

FIRST PRIZE—BEGINNERS' COMPETITION

The Great Opportunity

In the June issue I pointed out the need to make every plate, roll-film, film-pack and piece of printing-paper yield maximum results. That is, to avoid all waste due to making more exposures than actually needed to obtain one good negative. Moreover, I called particular attention to the necessity to use chemicals very carefully and to make every ounce work to the limit. By so doing, the pleasures and benefit of photography might be enjoyed without a prohibitive advance in cost. To put it frankly, it is just as much a question of patriotism as the conservation of food, clothing and fuel. Although the practice of photography has been ranked for years as a luxury, it is to-day becoming more and more a military and civil necessity.

It is my intention to call attention here to the opportunity that beginners have at this time to master lenses, shutters, cameras, developing, printing and enlarging equipments. During the spring, many beginners have read photographic books and magazines, studied catalogs and, at length, decided upon their photographic equipment. They have anticipated the warm days and brilliant sunshine of summer which they hope will open wide the doors to their photographic El Dorado. The days for action have arrived! In the next four months it is up to them to master their equipment and produce results. Hence, I consider that the beginner's great opportunity is at hand to make a success of his photographic venture.

The experience of a young recruit is a striking case in point. As soon as he has obtained his uniform, a corporal takes him in charge to teach him the school of the soldier. He right-faces, left-faces, about-faces, salutes and stands at parade-rest with a fair degree of success. Then he is put through the manual of arms; also with fair success. At length, he is dismissed. When he reaches his barracks, he picks up a copy of the infantry-drill regulations, sits down and reads carefully the rules that govern the school of the soldier and the manual of arms. As he reads, his mind becomes less confused by the multiplicity of detail and he appreciates the sound reasoning back of every order. The next day he goes through the drill with such intelligence and snap, that the corporal compliments him highly. Whether we can all do as well as this young recruit, depends upon our intelligence, initiative and determination. However, the point is that the physical manipulation of a rifle or a camera must go hand in hand with a mental grasp of the underlying purpose of every step that is taken.

Despite the fact that photography has been simplified wonderfully, the human element is still of the greatest importance. Diaphragms and shutters must be set correctly; focusing must be done accurately and films and plates must be handled with care. To date, there is no automatic device to perform these functions, and the beginner who is determined to succeed will master each one without delay. The instruction-book that accompanies the beginner's camera is his very best friend. In no circumstances should he mislay or lose it; for, even when the tyro-days are over, the instruction is "an ever-present help in trouble." The experience of the young recruit should be recalled in connection with the instruction-book, for it parallels in value the infantry-drill regulations.

The beginner who is about to use his new camera for the first time, should read only such parts of his instruction-book as apply to filling the camera with

plates or films, setting the shutter and stop, focusing, making the exposure and removing the plates or film. Next, he should take up the problem without assistance, *make the exposures* and *remove the exposed plates or film*, ready for development. Then, it will be well for him to sit down and read the instructions all over again. If the subsequent results of the first exposures prove to be failures, ten to one the re-reading of the instructions *afterward* will disclose whatever mistake was made. Since the matter of exposure is one controlled solely by the correct use of stop and shutter-speed, it is obvious that the manipulation of the lens and shutter must be mastered before consistent progress can be made. Now is the opportunity to learn the theoretical and practical manipulation of the most important parts of the entire photo-equipment.

Next in importance comes the correct handling of the camera itself with regard to focusing, leveling and viewpoint. No matter how much the beginner may read, he can never gain the necessary self-confidence unless he puts into practice what he reads. Moreover, the advice of others is often helpful; but the beginner will do well to stand or fall by his own efforts. The many types of cameras now on the market make it imperative for the beginner to master each detail of manipulation. As he advances, he will need or desire equipments of different types. Unless he understands each type thoroughly as he uses it in turn during the course of his progress, he will never feel that assurance that is essential to photographic success.

With regard to developing, printing and enlarging, it will be invaluable experience for the beginner to do his own work until he has grasped the chemical and technical principles involved. Later, if he decides to use a developing-tank, printing-box and have his enlargements made by a photo-finisher, he will be able to obtain the desired results easily and intelligently. The beginner should never lose sight of the fact that a thorough grounding in the rudiments is never time wasted in the end. No satisfactory photographic progress can be made without this grounding. Of course, results may be obtained without this apparently laborious apprenticeship; but there can never be the same self-confidence and uniform success that is enjoyed by the amateur who is thoroughly prepared.

The great opportunity is now at hand for every beginner to stand on his own photographic feet. It is up to him to justify the expenditure of the time and money invested in his new photographic equipment. The chaff will soon be separated from the wheat. Those beginners who mean business will advance and enjoy the fruits of their efforts; others will fall by the wayside through lack of determination or interest. Every beginner now has the opportunity to decide, once for all, whether he will master photography or let photography master him.

A. H. B.

A Leaky Shutter

With regard to discovering a leaky shutter, R. M. F. in *The Amateur Photographer* points out that it sometimes happens that mysterious light-markings appear on negatives that point to light leaking into the camera between the shutter-blades. These often appear when the camera has been carried in a very bright light, as at the seaside, or has been laid on the ground with the lens pointing to the sky. The easiest way to test the light-proof character of the shutter is as follows. A piece of bromide or gaslight-paper should be cut so that it will exactly fit the inside of the bellows at the far end close against the inside of the front. This should be loaded into the camera in the position stated, the film-side of the paper being towards the lens. The camera should then be taken out into the open air, and laid upon its back pointing directly to the sky, and of course the shutter must be closed; the instrument should be allowed to remain in position for say a quarter of an hour. The paper may then be taken out and developed, and the finished "print" will show if there is any strong light entering in the direction named, and subsequent action decided by the worker.

Chemically Made Clouds

The importance of suitable clouds cannot be underestimated. R. M. F. in *The Amateur Photographer* furnishes some good suggestions. One very easy way to create clouds in a "bald-headed" sky is to employ local reducer with a brush. The negative is placed in a retouching-desk, or, in the event of one not being available, held up to the light at arm's length, film-side towards the operator. The ordinary ferricyanide and hypo seems the best to employ, and this should be used at half its working-strength. The only other requirement is a camel-hair brush, size according to the negative, say a No. 4 for a small negative, and with larger ones accordingly the size of the brush is increased. The negative to be treated is first given a good soaking, and is then taken from the washing-water, given a rub with a tuft of cotton wool to dry up surplus moisture, and then the reducing-solution is applied with the brush to the sky-portion only. A few moments' work will be sufficient generally to create some clouds, and care should be taken not to overdo it either in quantity or the action of the reducer. When it is seen that the operation has gone far enough the plate or film should be given a quick wash under a tap to stop further action, and then washed for half an hour. It may then be dried. Two cautions may be given. Work first on a waste-negative in order to get acquainted with the action of the reducer, and do not charge the brush too fully with the solution. If the brush is overcharged with the liquid, and the latter spreads into an area of the negative where it is not wanted—great care must be taken to prevent this—wash the negative rapidly in a stream of running water and start the operation afresh.

Thorough Fixation

One of the most important things to remember, before intensifying a negative, is to see that it is *thoroughly fixed*. If many prints have been made from the negative, particularly after it has been submitted to the powerful rays of the sun, and the negative may not have been thoroughly fixed, little can be done to repair the chemical damage. The best way is to begin right, and to use a freshly prepared fixing-solution. If desirous to be economical, the plate may be fixed in a used hypo-solution for about fifteen minutes, and then for the same length of time in a fresh solution. Thus, two fixing-baths may be used to advantage and ensure perfect fixation; otherwise stains will result in the negative which will be difficult, if not impossible, to remove. Very frequently, a worker will look up a negative that has lain idle for a number of years only to find that it has become discolored, and in an endeavor to remove this stain, he meets only disaster, and the negative is ruined for all time. Hence, thorough fixation is one of the most important steps in the making of a negative.

W. A. F.



THE ROAD TO THE BARN — ALBERT HUEGLER

SECOND PRIZE—BEGINNERS' COMPETITION

Staining Prints

It adds greatly to the effectiveness of many night-pictures if we give the paper on which the print is made a slight red or orange stain, so that the highlights may suggest artificial light by their color. I find that for gaslight-prints ordinary red ink answers very well: but in its "neat" condition it gives a color that is much too deep. A dram of it may be diluted with water to make one ounce, and this will be quite strong enough, as a mere suggestion of warmth is all that is required. In this liquid the print should be immersed bodily for a minute or two and then taken out, rinsed in two or three changes of water, blotted off and put up to dry. If, when it is dry, the color is not as deep as is wished, the treatment may be repeated; if it is too strong, the print may be soaked in water until it is sufficiently lightened.—J. Moss, in *Photography*.

That Darkroom!

Why all this fuss about a darkroom? Why move thy ponderous intellect in a vain effort to convert the bathtub into a developing-tank when there is always someone to pound on the door? Or do your ideas run toward kitchen-sinks and wash-basins? If so, my advice is to pull out the stopper and let 'em run on down to oblivion, via the pipe. The kitchen or the pantry is a bad place to mix developer. A box of powdered hardener, mistaken for baking-powder, would harden the biscuits instead of the pictures. Perhaps, it is your custom to burrow in some little hole like a woodchuck, and there call forth the "picture genie" with a smelly little kerosene-lamp. Like Aladdin, you will make a lot of smoke, but you won't have much fun. Such a darkroom will ruin your disposition, if nothing more.

Those who believe in going to extremes, sometimes, try either the cellar or the attic. Sooner or later, they usually find both places extremely uncomfortable, because in all ordinary houses these places are too hot, or too cold, for at least six months in the year. Besides, they are often dusty; and dust is the photographer's greatest, even though smallest, enemy.

Perhaps, you are one of those modern people who read the latest facts about everything and know how to do things according to the very latest methods. If you are a woman, you own a kitchen-cabinet; if a man, you repair your own Ford. This kind of a person is sure to be impressed by those interesting little articles entitled: "How to print Pictures on the Sitting-Room Table without Spotting the Carpet." Now, it is possible to do that very thing, and with the room brilliantly lighted; but, if you can make the rest of the family believe it, or work with three or four others in the room, you are a wonder, to say the least. You would make a fine ambassador to Mexico.

The only way to have a comfortable darkroom is to build one. But the ordinary novice doesn't really need a darkroom at all. To develop films, all he needs is a film-tank. The wash-tub (not basin) will serve as a work-bench; for when the film is once in the tank, it needs very little attention. Most people agree that the tank gives the best results and it is certainly convenience itself.

The handiest place to print pictures is your own bedroom. Now don't laugh, because it is no joke. It's the truth. If you have a slightly battered desk, you are in luck. Place it in your bedroom. It may be used both as a place in which to keep your materials and as a work bench. Then when you have a few dozen pictures to print, simply step up to your bedroom, pull down the shades, let down your desk-cover, and proceed. Of course, you will need a pitcher of water, and it will be necessary to wash a couple of trays afterwards; but these are the only steps you will need to take. Simplicity is bliss.

Kenneth Bolles.

ANSWERS TO QUERIES

Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.*

H. S.—**How to make enlarged negatives** is rather too big a subject to handle in a letter. In July, 1908, there was an excellent article on this subject by George C. Elmberger, a prominent member of the Chicago Camera Club. If you have a file of PHOTO-ERA you can look it up, or we will send you a copy if you desire. In brief, the process consists in making a contact transparency on glass, using this instead of the negative for making a paper negative in the enlarging-lantern, the developed negative print being rendered transparent for printing by contact supported by a plain glass in the printing-frame. The chief advantages of paper negatives are their cheapness, absence of breakage, light weight and the ease with which modifications in pencil may be made on the paper side of the negative.

C. C. F.—**What is the *best lens for portraiture* in the world?** To answer this question intelligently and without prejudice is impossible, as there is no *best lens* in the world for *portraiture*. PHOTO-ERA advertises in every issue a number of optical firms of the highest reputation, whose lenses are giving the fullest satisfaction for the purposes intended. There are a number of high-class anastigmats made by as many distinguished optical firms in Europe and in this country. One of them makes a type of lens which will give extreme sharpness and which, by simply manipulating one of the combinations, will give a diffused definition in any reasonable degree desired. Certain firms also make what is known as a soft-focus type, which likewise is advertised in PHOTO-ERA. Examples of both kinds of work are published in nearly every issue of this magazine.

J. H. D.—**Bromide prints which have been bleached from too long emersion in the fixing-bath** may sometimes be restored by sulphide toning, although it is usually simpler to make a new print if the negative is available. The print must first be completely bleached and for this two solutions are required, the same as for a negative.

W. C. C.—**The best way to use the reducer** is to make a 10 per cent solution of potassium ferricyanide and one of the same strength of hyposulphite of soda, or any plain hypo fixing-bath will do. For use, take enough of the hypo solution to cover the film well and add to it enough of the ferricyanide solution to give it a slight straw color. The action should be quite rapid. If it does not seem to act properly, add a trifle more of the ferricyanide.

C. O. K.—**A good intensifier is made as follows:**

No. I

Mercuric chloride	1 dr.
Ammonium	1 dr.
Water	4 oz.

No. II

Ammonia 880	1 dr.
(Stronger ammonia water.)	
Water	4 oz.

Immerse film in No. I until well bleached. Wash well and blacken in No. II. Wash.

L. B.—**A convenient varnish for protecting the labels on bottles** can be made in the following manner. Soak a discarded film negative in hot water until the gelatine coating is removed. Cut the film into small pieces and put them in a bottle with enough acetone to cover well. With occasional shaking the celluloid will soon dissolve. If too thick, add acetone.

P. M. N.—**The wrapping of undeveloped plates in any paper is risky,** and newspaper is almost sure to cause trouble. Pack your plates face to face, being sure that there are no particles of grit or dust between, and you will avoid the trouble in future. To remove the impression of the printing, rub the plate with a piece of absorbent cotton wet in a solution of citric acid, 5 grains to the ounce of water.

T. B. P.—**To give a brown tone to blueprints,** bleach the prints until all blue has disappeared in a solution of caustic potash (½ dr. to 6 oz. of water). Wash thoroughly and immerse in a bath of tannic acid (1 dr. to 8 oz.). This will give a brown tone to the prints. When they reach the desired tone, wash well and dry.

M. P. G.—**To mount prints on glass,** prepare the following solution. Soak ¼ oz. of good gelatine in 2 oz. of water over night. Add 16 oz. of warm water, making sure all the gelatine is dissolved. Wipe the glass with alcohol to be sure there are no fingermarks or greasy spots, then dip prints in the gelatine solution while still lukewarm and squeegee at once on the glass.

D. C. G.—**The softness of definition** you so much admire in the portraits appearing in January PHOTO-ERA is due partly to the slightly rough surface of the original prints and partly to the use of a soft-focus lens in producing the negatives of others. The best of the present available soft-focus lenses are made by Pinkham & Smith Co., Boston, and the Wollensak Optical Co., Rochester, N. Y. One or two sheets of transparent celluloid, placed between the negative and the printing-paper, also produces an agreeable degree of diffusion in the resulting print.

S. L. N.—**Platinum is a precious mineral** found chiefly in the Ural Mountains, Russia, but for several reasons it is difficult to obtain at the present time. The war is also responsible for the scarcity of Platinotype paper, in the preparation of which platinum is the chief ingredient. Deposits of platinum have been discovered in America and in Mexico.

W. M.—**Your question seems to imply the belief that the lens-stop should vary with the condition of light.** This is the case with small, inexpensive cameras; but it is not the ideal condition, for it gives no opportunity to make a distinction between detail and definition, the former being something that is exposed for and the latter something that is stopped down for. In the highest form of photographic work the stop is put in the lens quite irrespective of the exposure; its purpose is to regulate depth of focus, separation of planes, and the degree of definition. Correct exposure according to the condition of light is preferably regulated by the shutter-speed.

B. D.—**The F-numbers of lenses,** such as F/7.5 and F/6.3, indicate the working-aperture of the lens at which good definition may be had, and hence the speed of the lens. The numbers themselves indicate the quotient resulting from division of the focal length by the diameter of the largest diaphragm-opening. Thus, F/7.5 means that the diameter of the diaphragm-opening is contained in the focal length 7.5 times; also it may be seen that the smaller the number the larger the relative working-aperture and the shorter the necessary exposure. A higher degree of correction is required for rapid than for slow lenses.

PRINT-CRITICISM

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.*

A. B.—Your landscape is dull, monotonous and without the slightest artistic interest. The scene would possibly be more attractive had you not emphasized the pool in the foreground, which is not particularly attractive and which seems to be of chief interest. A different viewpoint might have yielded a more artistic result. Besides, there is nothing in the picture to indicate the spirit of winter, as expressed in the preparatory article written by our Mr. Beardsley, in the February issue, which you appear not to have read. I would suggest that you read our monthly department, "Our Illustrations," in which every picture in the book is criticized. In this way, you will learn much more than by a personal analysis of your picture.

A. J. V.—Your picture of a donkey looking out of its stable, with the door open, is unusually interesting; but as the door receives the strongest light, it becomes the most conspicuous object in the picture and detracts very strongly from what should be the chief principal pictorial interest, viz., the donkey. The tone of the print is excellent, but the result is marred by the brilliantly lighted open door. The numerous vertical lines at the left of the stable-entrance, including the long-handled spade and pitch-fork leaning almost vertically against the stable, are also artistically objectionable and should be avoided.

A. H. P.—Your picture of a beautiful fountain in front of a dormitory of a girls' college, with a number of girl students grouped about, has great artistic possibilities. Unfortunately, the grouping of the figures is not very artistic and, besides, the strong light on the buildings combined with the central shadow causes confusion in the arrangement of the pictorial design. Had the picture been taken with a different light, and the girls grouped naturally and artistically, the result would have been more pleasing.

P. V. V.—Your view, "Bowing to the Will of the Winds," shows in the middle distance and exactly in the center of the picture-area, a tree with its branches inclining towards the left, apparently the result of a strong wind blowing at the time, and which is the most conspicuous object in the landscape. It is placed unfortunately, contrary to well-known art principles. Besides being considerably in shadow—owing to the fact that the sun is directly overhead—it does not add to the pictorial effect of the composition, which in a general way is very interesting. Try the theme again, late in the day, and take advantage of long shadows.



KILDONAN PARK — EDWARD J. WILLIAMS

THIRD PRIZE—BEGINNERS' COMPETITION

R. W. B.—Your picture, "The Turn of the Road," has no special pictorial interest. The original scene may have delighted the eye and attracted the camerist, but the result does not warrant the hopes indulged by the camerist. An automobile in a picture is not, in itself, an artistic object. Here it is the principal note in the picture, whereas it should be rather an accessory. The foreground is brightly illuminated, and might have been improved by shadows provided they could have been introduced earlier or later in the day.

B. W. R.—"Farm-Street Bridge," apparently over the Charles River, near Dedham, is a pleasing bit of landscape, but without any special pictorial interest. The bridge occupies exactly one-half of the left of the picture-space, and the landscape and two trees the other half. Another viewpoint, showing the bridge in a diagonal perspective, might yield a more pleasing result.

OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

MANY of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general, that, in order to stimulate and help develop this valuable faculty, we have introduced this competition. It consists of the reproduction of a photograph lacking good composition. To him who sends us the best criticism, before the twentieth of the current month, we will send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson; price, $1.50. In the event of several criticisms (not exceeding three) being satisfactory, they, too, will be awarded copies of the book.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his book.

Successful Criticisms.

THERE are four bad points to this picture, each in itself an unpardonable sin and one over which the beginner usually stumbles. Standing out most prominently is the offensive background—a common mistake to all beginners. The second point is that the figure is entirely too large for the picture. Beginners always think it is necessary to get as close as possible to their subject, not realizing that fixed-focus cameras do not yield sharp pictures closer than six feet. This brings up the third point that the child is out of focus, being closer than six feet to the camera. The last point is in regard to the lighting: with the bright reflected light from the pavement, the child is necessarily forced to squint. What should have been done was to pose the child in a more subdued light where there was a suitable background.

KENNETH D. SMITH.

A VERY interesting picture of a sturdy little chap but what a pity that the definition of his features could not have been a trifle sharper—his shiny little shoes and the uninteresting clapboards seem to have been the objects on which the lens was focused. The lighting on his face is fine, and plenty of detail produced in his clothes; but his eyes lack life and the horizontal (nearly so) lines all about him are disturbing. His pose is pleasing; but three-fourths of an inch can be profitably clipped off the left side of the print and a trifle added to the foreground, were it possible. The sun seems to have been in a favorable position to produce a good effect in lighting on the youngster's face; but in a picture of this size and kind, sharper focusing is absolutely essential.

GEO. W. FRENCH.



THE PICTURE CRITICISED THIS MONTH

It is regrettable that this pleasing characterization of a charming little chap, in the May number, should have been marred by the selection of a very distracting background. Trim seven-eighths of an inch from the left; add on-eighth inch to the bottom, enabling the left foot to clear the edge of the print. By touching out, on the negative, the black horizontal shadows, the figure of the child will be brought into relief against a simple flat tone.

Charles A. Hughes.

Three faults are plainly discernible in this photograph; but with some modification the owner of the negative should be able to obtain a satisfactory print. The atrocious background must be eliminated or changed entirely in appearance by the liberal use of opaque on the negative; for the lines of the clapboards and curb make a pleasing picture absolutely impossible. Then the black shoes, which form distracting spots, should be lightened in tone by pencil-work on the negative. Finally, the enlargement should be made so as to give more detail in the face and avoid the eyeless eye-sockets and general smudgy appearance which so greatly mar this print. To retain a pleasing amount of diffusion in the remainder of the picture, while giving sufficient detail to the face, the operator should make the enlarging-exposure in two stages, at first using a small stop in the lens and printing only the head, and then with a large stop printing all but the head. At the beginning the lens should be set slightly out of focus.

H. H. Bliss.

Regarding picture for criticism in May, 1918, issue, (1) the clapboards and timber or concrete curbing make a very poor background. Foliage, indistinctly focused, would have been much better. (2) It would be better to make such a picture in the shade. (3) Indistinctness and lack of detail in face and clothing indicate overexposure of light-colored portions of picture. Faintness of shadow on right shoulder confirms this. Shadow on walk is more distinct. This indistinctness may be due partly to faulty focusing; but the child's shoes are almost as clearly defined as the background. (4) One-half inch should be trimmed off at left; one-eighth inch more allowed at right; three-eighths inch allowed at bottom; one-sixteenth trimmed off top. (5) Boy is looking at camera, but as he naturally would look if spoken to or if watching something which interested him.

Charles C. Fortier.

OUR ILLUSTRATIONS

WILFRED A. FRENCH

The current initial illustration consists of a typical wood-path in the neighborhood of Bar Harbor, Mount Desert, Maine. A territory of about 5000 acres, in the southern part of this picturesque island, has been presented to the nation by a number of public-spirited citizens of Mount Desert and is to be used for the purposes of recreation by the public. It is now known as Sieur de Monts National Monument. A bill is now before Congress for the United States Government to accept, keep and manage this garden-spot as a national park for the benefit of the public. The locality to which George R. King's attractive wood-path is leading, is known as Schooner-Head, and borders on the prospective national park already referred to. It will not be long before it is included in the reservation.

The artist chose his light, about noon-time, so as to avoid the innumerable highlights that result when the sun is lower and sifts diagonally through the partly open foliage of a wood composed largely of birches. In this way, sunlight permeated the locality and formed countless shadows that slightly overbalanced the highlights. Foliage overhead caused transparent shadows to fall upon the path and gave it character. What threatened to result in a symmetrical arrangement, has been converted into a pleasing composition by the choice of a viewpoint that yielded a conveniently slanting birch as a foreground accessory, which, though a striking object in the picture, does not impair the artistic importance of the pretty, receding path. Data: July, 11 A.M.; bright sun; 8 x 10 Korona Camera; 12-inch Dagor; at F/16; 8 x 10 Cramer Iso; pyro; contact Azo print.

"Speed," page 5, delights the eye by its novel and graceful pictorial design. True, the yacht is sailing out of the picture, as it were; but this tendency is thwarted by the big wake which pulls the craft, as the principal object, backwards—at least, it holds the craft in place, figuratively. The sun is high, and projects the shadows towards the beholder, thus giving character and solidity to the composition. The proportions are admirable; so are the tonal values.

Much credit is due Mr. Pondelicek for his ability in managing the difficult subjects he has portrayed. Though an amateur, he has the making of a professional portraitist. The four character-studies that accompany his instructive paper are commensurate with the information that he offers. This is in pleasing contrast to those photographic writers whose camera-work is inferior to their professions. Data will be found at the end of Mr. Pondelicek's article.

"The Old Mill," page 11, though a familiar camera-subject, has much that is commendable. The usual fault—symmetry of arrangement—has been overcome by choosing as large a perspective view as possible, with a variety in the material that composes each side of the dam. The "youthful" camerist wisely decided to impart interest to his foreground, which he accomplished by including stones and débris that were conveniently available. The light was favorable at the time, and the exposure and development correct, so that the total result is good. Data: June, forenoon, 1892; good light; 4 x 5 Rochester Optical folding camera; No. 1 Darlot R. H.; stop, F/16; dryplate; pyro.

"Mountain-Cascade," page 11, is equally meritorious, except that the subject gave the camerist greater freedom to compose his picture. With artistic judgment, our artist chose the diagonal form of composition and produced a very satisfactory result. Data: June, forenoon, 1892; good light; camera, lens, stop, etc.; same as preceding; print yellowed with age.

Old readers of PHOTO-ERA who have enjoyed the exquisite marine-creations of William Norrie will welcome another gem by this productive artist—"Alone on the Sea," page 13. Admirably chosen, beautifully proportioned and delightfully executed, this view off the eastern coast of Scotland stirs the emotions in times like the present. But let this peaceful scene rather turn our thoughts to less material things—the all-pervading hope that thus may it soon be among the nations of the earth.

The adorable genre, page 14, was one of many much-admired pictures of a large and notable collection of professional work, by the Maynards, of Boston, exhibited at the rooms of the Society of Arts and Crafts, several months ago, and described in our May issue. The chubby little model has been managed with the view to obtain a round, plastic effect—a result made possible by concentrating the light and using a suitable lens. The rendition of the fleshtones and the gradations are characteristic of the technical skill of the Maynards. Data: 6½ x 8½ Century View-Camera; No. 2 Voigtländer Euryscope; 10-inch focus; stop, F/6, 1/25 second; 6½ x 8½ Standard Orthonon; contact print on Eastman permanent Bromide Paper.

The four illustrations to William S. Davis' article, pages 17, 18, 19 and 20, are indicative of the sound artistic ability and the uniformly careful technical attention which that inexhaustible worker bestows upon his productions. The first three pictures of the present series illustrate, particularly, his mastery of light and shade. Data: "Sunshine and Shadow," page 17; a group from the Maine Memorial, at Columbus Circle and 59th Street, New York City; soft sunshine at 11 A.M.; Ilex Anastigmat; stop, F/6.3; Ingento A ray-filter; 1/10 second; Cramer Inst. Iso plate. "Huntington Porch," Grace Church, New York—page 18; about 9.30 A.M.; bright sunshine; stop, F/32; Ingento ray-filter; 5 seconds—a very full exposure to overcome the excessive contrast; Inst. Iso plate. "Under the Portico," Public Library, New York—page 19; diffused light; used supplementary lens to obtain wider angle of view; working-aperture about F/11; 1 second; Inst. Iso plate.

"The City of Towers," New York—page 20; a study of the East River waterfront; made from Long Island Sound steamer at 1.10 P.M.; cloudy day; stop, F/6.3; 1/100 second; Inst. Iso plate; print from part of negative.

The striking war-picture, "Over the Top," illustrates the courage, in face of imminent destruction, of Canadian infantry in Flanders—a courage that is the result of obedience to orders and perfect discipline. We have been informed, upon the authority of the photographer, himself—Captain Castle—that all but two of the men visible in this charge were killed within one minute after the German marksmen got the range.

Very little can be said of "Twilight-Spectres," pages

30 and 31, except that the rather light tone of either reproduction does not convey the true meaning of the picture. It was made at the approach of evening, and the dead trees, as they reared their gaunt, stark forms high above the little foot-bridge, suggested the thought of spectral apparitions. It may be interesting to compare the print of sharp definition with the one in which the clear detail has been suppressed. The author invites expressions of opinion regarding the comparative technical merit of each reproduction—from readers who may admire complete detail and others who prefer diffused definition. Data: contact-print; September or August, 1890; at twilight; No. 2 Euryscope; 10-inch focus; stop, F/22; about twelve seconds; Wuestner double-coated plate; pyro; contact albumen print. Diffused enlargement was made from the same original negative, with P. & S. Semi-Achromatic lens, on Cyko Enlarging paper.

The picture of the quaint old domicile of Betsey Ross, in Philadelphia, U. S. A., where was made the first American flag, will surely be examined with patriotic interest by every reader of PHOTO-ERA. The view presented on page 32 is an unusual one, in that "Old Glory" is fully displayed in front of the ancient landmark, which, as well as Independence Hall and the Liberty Bell, constitutes a most precious souvenir of the birth of this nation.

Advanced Workers' Competition

THE entries in the "Rainy-Day Pictures" competition proved to be disappointing in variety and treatment of subjects. This is explained by the fact that time and opportunity have been lacking, and pictures along conventional lines, that were made long before PHOTO-ERA announced its preference for original themes, were not entered, this time, by conscientious contestants. As one worker wrote, "Practical interest in war-activities, besides my regular vocation, has prevented me from adopting your wise counsel to take advantage of the many interesting camera-subjects that present themselves during a severe rain-fall or sudden shower. Several times, on looking out of the window during a thunder-shower, I was tempted to grab my ever-ready camera, rush out—regardless of the weather—and snap a scene suggested in the advance notice in March PHOTO-ERA; but I was held at my desk. At other times when there were early indications of a severe shower, I walked up and down the street, camera in hand, awaiting the down-pour, which failed to materialize."

Nevertheless, a fair number of interesting entries were received; but the print that deserved the first prize was eminently lacking. Better luck next time!

The chief merit of Mr. Burgher's prize-picture is the admirable interpretation of the theme suggested for this competition, viz., "Rainy-Day Pictures." He deserves special praise for having discovered, at last, that inclement weather may be pictured other than by the conventional combination of a wet street and a raised umbrella. Let us give this time-worn theme a long and well-earned rest. It is to be regretted that the large ornamental globe must needs be in the picture. There is still time to remove it from the negative. About ¾ of an inch trimmed from the top, and touching out the two tree-trunks, would improve the proportions and appearance of the picture. Data: April 21, 1918; 2 P.M.; raining at the time; 3A Kodak; Kodak anastigmat; stop, F/8; 1 5 second; 3¼ x 5½ Standard Orthonon; pyro-soda; in tray; enlarged from half of negative on P. M. C. Bromide; Amidol.

Though not a literal representation of a rainy day, "Fishing-Weather," page 37, received official recognition. The picture is very suggestive of inclement weather. It's the day when they "bite"—the fish, not the mosquitoes. The pictorial beauty of the scene is its chief merit. There is a spontaneous balance of parts and a pleasing atmospheric quality. Mr. French wisely went into the country to find his theme. Data: August, 2.30 P.M.; rainy; 5 x 7 Tele-Photo Poco; rear lens of 9-inch B. & L. R. R.; stop, U. S. 16; 2 seconds; Standard Plate; pyro; enlarged on P. M. C. No. 8; cloud printed in.

Beginners' Competition

IN his home-portrait composed of the heads of two children—page 41—J. Herbert Saunders has produced an effect that is rarely found even in a similar group produced in a high-class studio. I refer to the differentiation in planes when a sitter is behind the other. In the present instance, the little girl, who appears to be holding her baby-brother, is slightly back of him, and this circumstance is indicated by slight difference in the illumination of the two figures. Moreover, the group is exceedingly well balanced; and, though the girl is looking into the lens the effect helps to produce unity. In any event, the group is worthy of study.

A sound knowledge of light and shade might have induced Albert Huegler to select a different time of day at which to photograph his very promising view, "The Road to the Barn," page 43. As it is, the dense foliage at the right, already a mass too dark to harmonize with the rest of the picture, casts a large, black shadow, and the two form a large mass of impenetrable darkness in which there is neither beauty nor reason. The effect is altogether too one-sided to be of any benefit to the composition. It might be lightened—by pencil or brush—on the negative, and materially help matters. Let the experiment be made. Data: Postcard-size camera; R. R. lens; at F/16; 1/5 second; Central Comet Plate; hydro-metol; Glossy Prof. Cyko.

It is very difficult to make a well-composed picture in a forest or of an irregular collection of trees. All the pictorialist may do is to try to render the beauty of the scene expressed by his artistic individuality. The view presented by E. J. Williams, page 45, does not evince an attempt to offer a notably pleasing arrangement, nor to emphasize any particular object, except, perhaps, to suggest that Kildonan Park, somewhere in Canada, is a naturally attractive spot. Data: July, bright light; Autographic Kodak Junior; Kodak Anastigmat F/7.7; stop, F/11 1/25 second; Eastman film; dev. in Kodak tank; enlarged with Brownie Enl. camera on Platino C. Bromide paper; M. Q. dev.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is "A Pebble on the Beach," by A. C. G. Allison. To assist at a better understanding of the composition, the following data are supplied: August, 11 A.M., 3¼ x 5½ 3A special Kodak; stop, F/16; 1/100 second; 6¾-inch B. & L. Zeiss Tessar II b; N. C. Film; metol-hydro; Prof. Cyko Plat.

Examples of Summer-Shadows

IN connection with this issue's editorial, "Summer-Shadows," beginners, eager to improve their work, may study with profit the excellent examples of the subject on pages 2, 5, 13, 17, 18 and 32.

ON THE GROUND-GLASS

WILFRED A. FRENCH

Enthusiasm Hath Charms

My most enthusiastic and also my best friend, William Williams—usually known as Billy—lives in the second house but one from my domicile wherein the land-lady multiplies the meatless days by three. Billy spices life by raving over everything, particularly ideas—his own ideas. When Billy gets an idea his enthusiasm grows in volume, like that of the siren; and like a siren it dies slowly and reluctantly only to rise again and again. Because I dwell in the vicinity, and because I really enjoy his company, I am often singed by the fire of his enthusiasm.

Only last evening, Billy burst upon the scenery with a new idea. I was just settling down on the steps for a quiet smoke, when I was interrupted by its birth. Billy cantered up with his customary awkwardness and sat down beside me.

"Say," he panted, "I have discovered a system."

"What do you mean by a system?" I asked.

"The only way to beat the game."

"What game?"

"I'll show you," he said, taking a large envelope from his pocket and extracting the contents which consisted of some prints and papers. He handed me one of them and I examined it carefully and inquiringly—with emphasis on the latter. Apparently, it was some kind of a picture, but what it was a picture of, I could only guess. More than anything, it appeared to be a broom-handle with some chicken-wire in the background.

"Well," I said, doubtfully, "what—"

"That is an enlargement of a photograph taken by Johnnie," he said as though that explained the thing. It did partly, as Johnnie was his young brother.

"I don't question that," I informed him, "but I should like to know, what in thunder Johnnie pointed the camera at to get this."

Billy laughed. "He tried to photograph his pet rooster, but the old bird didn't co-operate with him and jumped off the roost just as Johnnie snapped the shutter. The picture, as you see it here, is the roost."

I looked at Billy long and searchingly and nodded my head solemnly. "Yes," I said sadly, "I believe there is a strange look about the eyes."

"Say," he said, beginning to show fire, "what do you think—"

"Nothing," I said soothingly, "please continue with the exhibition."

Exhibit number two appeared to be a picture of a small lake over which hung a dirigible balloon in graceful repose.

"What did Johnnie aim at this time?" I asked in an agonized whisper. Billy laughed again—a wild quivering laugh.

"He tried to photograph his pet kitten eating a fish, but the poor little thing didn't co-operate with him and turned tail just as Johnnie snapped the shutter. That shows the fish and the—er tail."

In the deathly stillness which followed this explanation Billy handed me a small slip of paper. I didn't need to ask him what it was. I read: "Pay to the order of William Williams..... $250.00."

"Billy," I asked faintly, "where from?"

He pointed to the cheque. It was signed: Thomas E. Hope, treasurer, Wheelbrook Exhibition. I picked up the two pictures and looked inquiringly at Billy. Billy nodded.

"I entered them as a joke. The kitten's tail took first prize."

"Good Lord!" I cried, and fell back in a swoon.

KENNETH BOLLES.

The Length of a Pendulum

I WAS visiting a popular photo-supply store in New York, recently, when a customer pointed to the large store-clock, at the same time asking the salesman, who waited on him, what was the length of the intervals indicated by the pendulum. When told that each beat was a second, he naturally asked what was the length of the pendulum. "39.37 inches," answered the well-informed salesman. "But why 39.37 inches?" "In order," was the reply, "that it can beat seconds accurately. For, obviously, the longer the pendulum—regardless of its weight—the longer the beats, and the shorter, the shorter the beats." "Thank you for the explanation. But what is the scientific basis of the length of a pendulum whose beat is exactly one second?" was the next question. The salesman confessed that he did not know, but said that he would be glad to look it up and let the customer know.

Inasmuch as I was present at the conversation, I apologized for intruding and explained that, as a photographic writer, I had considerable to do with units of measurement, and that the topic of discussion rested entirely on the metric system where the unit of length was a meter, its equivalent in inches being 39.37—exactly what the salesman had stated. Furthermore, that a meter was an arbitrary, scientific dimension, being a one ten-millionth of the distance, on the earth's surface, from the pole to the equator.

A Novel Photographic Calling

THE trial of an itinerant flashlight-photographer, recently, for charging in advance for prints of a picture of a dinner-party, and then failing to deliver them, reminds the Editor of a similar affair that happened in the Hub, about twenty years ago.

A photographer, of the irresponsible sort, accompanied by his "pal" whose duty it was to invite the occupants of a store, in the business-district, to step out and pose for a picture, was doing a successful business making pictures of this kind on "spec." He exacted payment for prints in advance and then completely forgot the transaction. He was arrested, together with his companion, tried and, unable to pay the fine imposed by the court, sentenced to several months in the house of correction.

During the trial, the court asked the prisoner to state the nature of the work performed by his companion. "Oh," was the reply, "he's the 'caller-out.'" "The what?" asked the court. "The 'caller-out,'" repeated the prisoner. "And why does he call her out, pray?" asked the court. "Nobody calls *her* out," replied the photographer, indignantly. "It's the gents inside he calls out, to stand outside to have their pictures taken."

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

The Photographer's Training-Camp, Madison Barracks, New York

THROUGH the kindness and interest of Private J. C. Fairfield, 6th Provisional Company, Aviation Section, Signal Corps, Madison Barracks, New York, we are able to give our readers a few facts concerning the preliminary training that the men of the Photographic Division U. S. Signal Corps are now undergoing for overseas duty. To quote from Private Fairfield's interesting letter:

"Well, here I am at Madison Barracks, New York, on Lake Ontario. The nearest city is Watertown, New York, about eleven miles distant. The barracks were first used in the war of 1812 and consist of forty buildings inside the post. Recently, the post has been used for an officers' training-camp and it has accommodations for about 2500 men. At present, there are about 1500 boys here who are receiving military training preparatory to going to Rochester, New York, to attend the photographic school.

"The first day I arrived here I was examined by the physicians and measured for my uniform. I was among the first to open the barracks of my company, called the 6th Provisional Company, Aviation Section, Signal Corps. In a week's time we had a complete company of about 130 men. Acting non-commissioned officers were appointed. We have received an average of thirty hours of military and physical drill weekly. *I was completely uniformed—without gun—in two days.* I made out my allotment papers and insurance within the following few days. Everyone is advised to take out insurance to the extent of $10,000. It costs from $6.60 to $7.10—according to age—per month for this amount of insurance. This protection may be continued for five years after the war, then it must be transferred to some insurance company.

"We get up at 5.15 A.M. and then at 7.20 A.M. we drill until 8.45 A.M., then we have physical exercises by the entire battalion for one hour. After a rest of fifteen minutes we drill for another hour. This is followed by the school of the soldier for thirty minutes, then rest until 12 o'clock and mess. Each company has its own mess-hall and cooks. The food is very simple, but wholesome—*I have gained nine pounds.* (We can vouch for the fact that Private Fairfield needed these nine pounds badly. He called at the PHOTO-ERA office before he left for camp.—EDITOR.) At 1.20 P.M. we have platoon-drill and at 2.30 P.M. we hike to the surrounding country for two hours, unless it is raining. We now hike with light packs (22 lbs.) on our backs. If one is unable to take these hikes he is excused. For two days I had to do K. P. (kitchen-police) work. We get K. P. in squads in turn; but also for punishment for infraction of rules.

"One week ago Sunday my company visited the Thousand Islands. We went seventy-six miles by army-trucks and then thirty miles down the St. Lawrence river. We saw one of America's most beautiful spots. We were put into quarantine for about two and a half weeks and inoculated for typhoid three times and also vaccinated. Last Sunday I got a pass for forty-five hours and went to Watertown, New York. I stayed at the Y. M. C. A. and went to church twice. This morning one hundred boys went to Rochester, New York. It is expected that they will be sent at the rate of one hundred per week.

"We have a Y. M. C. A. here with motion-picture shows and a canteen. Our evenings are our own until 9.15 P.M. We have base-ball games and other sports, such as fishing, swimming, private hikes and camping-trips over Sunday. Take it all around, the boys are having one grand time. For the present we are allowed to use our cameras as much as we please.

"Well, when I get to Rochester I will attempt to tell you more about the photographic training. We have boys here now who are motion-picture cameramen, commercial and portrait photographers and many amateurs. There are some who never used a camera before. Several camera repair-men are here in the same company. In my squad-room there are twenty-seven boys and in this number twenty-two states are represented. If you should wish to make a short sketch of this letter go ahead and do so."

We are confident that the information given in this letter will be of interest and value to many PHOTO-ERA readers, in view of the fact that they, too, may soon join the Photographic Division. No branch of the service has greater responsibilities or offers greater rewards. From private to commanding officer the morale is of the highest and there is a steadfast determination to merit the sobriquet "Fighting Photographers." Men are needed now and will continue to be needed. Every commercial, professional and amateur photographer should prepare at once to do his duty. To win this war *every* loyal American *must* stand behind his country and his flag.

News-Photographers Needed at Once

THE Signal Corps is in urgent need of expert news-photographers. Men selected for this branch of the service must furnish satisfactory evidence as to their actual experience as staff-photographers with some newspaper or news-syndicate comapny, must furnish three letters of recommendation and must be American citizens by birth. It is essential that they be thoroughly familiar with the use of a Graflex and other speed-cameras, as well as various makes of lenses, their speeds, focal lengths and the manipulation of various makes of view-cameras in connection with ordinary photography and telephoto-work.

General Pershing has made a request for the best available news-photographers in this country to make photographs of important happenings in France. These pictures are to be preserved for future educational work in our schools and colleges and for a pictorial history of the war. It is intended to send the men selected overseas as soon as they have completed a short course in military training in this country. Upon the completion of this course they will be commissioned sergeants, first class.

Photographers who desire to see actual service in the near future should communicate immediately with the Air Service, Training Section, Photographic Branch, marking their communications, "For the attention of the Officer in Charge of Personnel."



POSTER MARY B. WHITE

The Clarence H. White School of Photography

The ninth summer-session of the Clarence H. White School of Photography will be held from July 8 to August 17, 1918 at Canaan, Conn. No spot in the famous Berkshire Hills is better adapted to the pictorial requirements of students than this region which abounds in rolling uplands, streams, rugged hills and domestic and church architecture of typically New England character. The course of instruction aims to teach the art and science of photography with a view to train the student for a professional career. Illustrated pamphlet describing courses, terms, equipment, etc., may be obtained from Clarence H. White, 122 East 17th Street, New York City; after July 8, at Canaan, Conn. Above "Poster" is from Mr. White's pamphlet.

Prove Your Patriotism

We have called attention to the need of the government to obtain photographs from every section of the United States that will help make a complete pictorial history of war. To date this appeal has not met the ready response it merits, and we believe that many photographers fail to realize that this is *not a request* so much as it is a *patriotic privilege*. The honor to be represented in the publication of the pictorial history of the war, is one that every truly patriotic photographer should covet at once. The May 1918 Photo-Era contained a detailed account of the requirements and prices paid for prints. Particulars may be had by writing to the War-Plans Division of the General Staff, Washington, D.C.

Election of New Contributing Members of the Pittsburgh Salon

The Executive Committee of the Pittsburgh Salon, as is customary, announces the election of new Contributing Members selected from among those who were represented in the Salon this year, and whose work has been of such individuality and character as to make possible this distinction. Those selected are as follows: Fred R. Archer, Los Angeles; C. E. Beeson, Pittsburgh; Alice Boughton, New York City; Louis Fleckenstein, Los Angeles; Emily H. Hayden, Catonsville, Md.; G. Buell & Hebe Hollister, Corning, N.Y.; Charles L. Peck, Buffalo; Remick H. Neeson, Baltimore, Md.; Jane Reece, Dayton, Ohio; Wm. S. Richter, Philadelphia, Pa., and John H. Stocksdale, Baltimore, Md.

Herbert B. Turner's Show

Herbert B. Turner, who contributed in an eminent degree to the artistic success of the recent members' show of the Boston Y. M. C. U. Camera-Club, held an exhibition of his work at the Boston City Club during the last two weeks in May. The eighty prints shown revealed conspicuous pictorial qualities, pleasing subjects and sound technical excellence. All were 8 x 10 enlargements on P. M. C., Cyko, and Wellington bromide paper. The subjects illustrated typical scenery of the Hawaiian Islands, the American National Parks, the Italian Lakes, and harbor-scenes of Boston, U. S. A. A few genres added to the interest of the exhibit. The collection is available for exhibition-purposes by camera-clubs whose secretaries should communicate with Mr. Turner.

Photo-Era Exposure-Guide Discontinued

Owing to the increasing number of practical and reliable exposure-calculators and meters now on the market, we have decided that our readers' interest would be better served by using the two pages now devoted to the Exposure-Guide, for text or illustrative matter. The Guide has served its purpose well, and when it was compiled it was second to none in practical value. However, the exposure-meters now being advertised in Photo-Era are so simple, economical and effective that we are confident that our readers will turn to them with confidence and satisfaction.

LONDON LETTER

CARINE AND WILL CADBY

Truly, war-time works wonders in the way it changes our outlook and converts us to all kinds of strange and foreign ideas. Not so long ago the Camera Club showed a very indifferent, not to say almost hostile, front to women, and yet to-day (or rather yesterday, as we are a little late with this letter) it is breaking out in a show of only women-exhibitors. Although the club opened its doors to the gentler sex—or rather lent them its walls—it certainly did not sow its invitations broadcast; only a very select few were singled out for this honor, and of the nine names in the catalog there is not one but is well known and has an excellent photographic reputation.

Mrs. Ambrose Ralli leads off with eight beautiful oil-transfers; one of them, "A French Peasant," is a really strong bit of work. The print is 15 x 12 inches and is, perhaps, the most effective and most pleasing decoration of the walls.

Mrs. Mania Pearson, another of our modern women-photographers, is well represented here. She made her reputation about two years ago and has maintained it steadily ever since. Her work, hung together on one of the chief panels, was impressive and interesting, and gave one a cheery kind of feeling that if some of the photographic folk can key their work up to this high level now, how they will go ahead when once their opportunities come back and the war is over!

Knowing that Miss Constance Ellis is doing photography professionally and devoting the proceeds to the Red Cross, we naturally expected to find nothing but portraits on her bit of wall. But among her six exhibits there are only three of her professional studies of children, and we heartily congratulate Miss Ellis on resolutely finding time to do other work as well. We wish that we had been able to show as great energy and enterprise; but the feminine writer of this letter had been able to contribute only three prints to this "Exhibition of Pictures by a Group of Women-Photographers," and she had tried to make these as various as possible by sending a "Kitten-Study," "A Cobweb," and a "Laburnam Tree by Night"!

The next show at the Camera Club will certainly be an interesting one, for Mr. Malcolm Arbuthnot is going to exhibit his "Photographs, Paintings and Sketches." We advisedly put photography first, because we know that this part of the show will be very good. Mr. Arbuthnot is undoubtedly quite at the top of the tree, as far as photography goes. About his other activities, one has not quite the same confidence. One cannot rid oneself of the idea that to be able to paint needs more than exceptional artistic qualities, and that without training the painter cannot get very far. However, Mr. Arbuthnot's exhibition, next month, may convert us to quite the opposite theory. There is nothing like preserving an open mind during these revolutionary days.

The Exhibition of British Battle-Photographs in Color, which closed lately at the Grafton Galleries, has been transferred to The People's Palace, Mile End, where it was opened to the public on the sixth of May. The continuation of this show in the East End of London, after its long run at the Grafton Galleries, demonstrates what a success it has been. Ever since the early days of the war the public has flocked to see pictures of the fighting, many of which in monotone have given a graphic view of the front and all its accompaniments. But these photographs in color were sure of an even stronger hold than ever on the people, for they appear more vivid and lifelike than any black and white work could possibly be. They are mostly colored enlargements, sometimes on a gigantic scale, of photographs of actual battle-scenes, troops on the march, wounded prisoners, transports, guns, etc., from both Eastern and Western fronts. Historical war-paintings pale before their realism, and there are many little incidents caught, as it were, instinctively by the camera that never could have been faked. And yet, in most instances, the composition of these photographs is quite satisfactory, and it is only when people are obviously posed for the camera, or are gazing at it with that curious self-conscious expression that follows human nature of all races even to the fighting-line, that we feel the mechanical influence of the lens and all its limitations.

It is worth while to record that the English weekly illustrated papers are changing with the times—that is to say, they are gradually beginning to recognize advanced artistic merit in the recording of the subjects which they most illustrate. As an example we may cite *The Tatler*, the price of which used to be sixpence, but now is ninepence. The current number has a large proportion of its pages taken up with the work of E. O. Hoppé, Hugh Cecil, Bertram Park and Malcolm Arbuthnot. Now until comparatively lately all four were amateur-photographers, and some of them have only very recently joined the ranks of professionals and opened studios in London. The subjects of their photographs in *The Tatler* are the same that usually appear in this paper, such as actresses, titled or well-known people, and, nowadays, soldiers as well; but it is interesting to see how these portraits, made by men whose artistic perceptions have not been dulled by the mill of professional photography, stand out in originality and grasp of their subjects. Their sitters appear natural and at ease, with hardly any suggestion of lens-shyness, and the composition of the pictures is certainly an improvement on the old, stiff style. If the policy of the illustrated papers continues in the same direction, we shall soon learn to look at them in a different light and enjoy their pictorial merits quite apart from the news-value of the pictures.

Owing to increased war-activities, the prices of glass and other materials have risen so appreciably that Kodak Ltd. have issued another revised list for photographic plates. Needless to say that it is in an upward direction; but this is a matter that troubles the professional more than the amateur, who in these difficult times has learned to be very careful with plates and films. The same firm has also had to cancel its list dated January 24 last (which was referred to in our letter of that month) and issue a corrected list, to date, with an advance in the price of Graflex cameras, and corrections in that of Brownie cameras, Panoram Kodaks, and Enlarging-Cameras. So the war-conditions make an ever shifting and confusing state of affairs in business and in all other conditions of life.

A film entitled, "America's Here," was shown privately for the first time, a short while back, at the

New Gallery Kinema. In it there are some vivid, and to English people, very cheering glimpses of the American Navy which is already working in European waters. The pictures were made during a visit of the First Sea-Lord to the American Fleet, and one film shows the officers of the two navies fraternizing; another, the process of trawling and destroying mines; and in yet a third we see the King among the officers and men of the Navy at Harwich. The public has been treated to many paragraphs in the papers relating to the arrival of the United States ships in our home-waters; but this is the first time that we have had actual pictures of the event, and it is sure to have a most heartening effect on our people.

We regret to record that Lieut. A. Consolé (one of the official photographers at the Front) was wounded while making photographs in an advanced position. A shell burst and shattered his leg. But casualties occur in every branch of war-service, and even photographers are not exempt.

P. A. of A. War Work

Photographers of every city and hamlet of America and Canada are asked to meet at once and organize a section of the Photographers' Association of America. All must be members, as we are making every man in the service an honorary member of this organization. Send the memberships to the National Headquarters, P. A. of A., Star Building, Washington, D.C., together with the following information:

1. Names and local addresses of photographers of your city who have entered the Photographic Sections of Army and Navy or are otherwise engaged in army or navy service.
2. Names of dependents, if any.
3. Are there dependents of photographers in service of your city who are in need of assistance?
4. What assistance has been or will be rendered?
5. Have any in the service left their business in charge of another? If so, who?
6. Give names and addresses of those who would offer photographic service voluntarily on future calls.
7. Give names and addresses of those of your ladies who will furnish knitted garments that may be required.
8. How much will your people subscribe to a fund to establish a base-hospital, an ambulance and any other accessories for the direct benefit of photographers in service? There will be a separate account kept of this fund. Contributions will be acknowledged through the official journal and the fund will be extended under the direction of Hon. Frederick P. Keppell, Third Assistant Secretary of War.
9. Have all of the photographers in your community bought Liberty Bonds?
10. Have all purchased War-stamps?
11. Are you assisting the Red Cross?
12. Give names and addresses of those who will compose a section of the Photographers' Association of America in your city.
13. Give names and addresses of officers of section.
14. Keep eternally at it. Meet every week and have reports sent to National Headquarters regularly.

CHARLES J. COLUMBUS,
General Secretary, P. A. of A.

A Useful Photograph

"HAVING any more trouble with that Flossie Fluffkins?"

"No," replied the manager. "I contrived to get hold of a photograph of her son, who is now thirty-six years old, and the last time she got huffy I threatened to show it to a newspaper-man."—*Exchange.*



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

A PHOTOGRAPHER IN RUSSIA. Donald C. Thompson. Illustrated with 63 photographs by the author. 353 pages. 8vo. Price, $2.00. New York: The Century Company. 1918.

As an illustrated record of personal adventure, this story, by an expert American camera-man who knows not the word "fear," is without doubt the most notable contribution to photographic literature that has yet been written. This recently published book, whose actual title is "Donald Thompson in Russia," deals with the author's experiences as a war-photographer in the enemy-country, but principally in Russia before and during that country's *débâcle*. His audacity and resourcefulness enabled him to accomplish feats with the camera that might be called quite impossible, were it not for the photographs themselves. They are incontestable proof of his enterprise and courage. During the course of his photographic experience, Mr. Thompson was arrested again and again; was wounded severely several times, and was frequently subjected to physical indignities and torture, only to emerge finally with invaluable evidence of actual conditions in the countries connected with this great war. He followed the Belgians in thirty-two battles; was arrested by the Germans, beaten, abused and thrown into prison; he fooled the German Secret Service by means of faked letters; saw Russian infantry fight with nothing but clubs, German intrigue having deprived them of rifles and ammunition; witnessed Russian artillery in vain attempts to fit the wrong shells to their guns; saw everywhere, in Russia and the Balkan States, the destructive influence of German propaganda, and, most important of all, was in Russia during the successive upheavals, and predicted the success of the Bolsheviki movement which culminated in the present despotic *régime*. Being gifted with exceptionally clear vision, Mr. Thompson noted with rare accuracy the succession of events in Russia, and the activities of the principal actors in the drama that brought bloodshed and ruin to that most distracted country. His pictures, made early in the war and sold to the *Daily Mail*, brought the highest price that had ever been paid for war-photographs. The sixty-three that are used to illustrate the book—composed of letters written to his wife—are only a part of thousands that he made; but they afford convincing and documentary evidence of the thrilling events that he witnessed, and which he describes in a manner at once clear, ingenuous and tremendously graphic. The book appeals to every person interested in the war, and with special force to every camerist, amateur or professional, who appreciates first-class photographs made under obviously adverse conditions.

Lottie: "He wore my photograph over his heart and it stopped a bullet."

Tottie: "I'm not surprised, darling; it would stop a clock."—*London Sketch.*

RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER

The following patents are reported expressly for the Photo-Era Magazine from the patent law offices of Norman T. Whitaker, Whitaker Bldg., Washington, D. C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps.

Focusing-Hood, patent No. 1,261,919, has been invented by Harrison Gindele, of Cincinnati, Ohio.

Photographic Developing-Apparatus has been invented by John S. Greene, of Rochester, N. Y., assignor to Commercial Camera Company, Providence, R. I., patent No. 1,261,926.

Patent No. 1,262,180 has been granted to Frederick E. Davies, of Detroit, Mich., on Method of Making and Projecting Pictures.

James A. Cameron, of Brooklyn, N. Y., has invented Picture-Exhibiting Apparatus, patent No. 1,262,578.

Folding-Camera has been invented by Robert Kroedel, of Rochester, N. Y., patent No. 1,262,677. He has assigned his rights to the Eastman Kodak Company, of Rochester, N. Y., a corporation of New York.

Patent No. 1,262,723, on Photographic Printing-Apparatus, has just been granted to Howard M. Webster, of Chicago, Ill.

Annie Barbee, of San Juan, Cal., has invented Camera-Attachment, patent No. 1,263,018.

Optical Divergence-Determiner for Cameras has just been invented by Alfred Freeman, of Colorado Springs, Colo., patent No. 1,263,223.

Patent No. 1,263,228 has just been granted to Joseph Goddard and William S. Hutchings, of Rochester, N. Y., on Photographic Camera. They have assigned their rights to the Senaca Camera Manufacturing Company, Rochester, N.Y., a corporation of New York.

Ryotaro Miyake and Toshio Yoshida, of San Francisco, Cal., have invented Camera, patent No. 1,263,588.

Camera has been invented by Elliott Morrell Stanley, of Chugewater, Wyo., patent No. 1,263,619.

Patent No. 1,263,684, on Focusing-Hood for Cameras, has been invented by Robert W. Leach, of Kansas City, Mo.

Photographic Film-Cartridge has been invented by Walter L. Farley, of Rochester, N. Y., patent No. 1,263,754. He has assigned his rights to the Eastman Kodak Company of Rochester, N.Y.

Robert Kroedel, of Rochester, N. Y., has invented Camera-Back, patent No. 1,263,904. He has assigned his rights to the Eastman Kodak Company, Rochester, N. Y.

Patent No. 1,263,962, on Paper for Producing Photographic Prints in Colors, has just been granted to John Edward Thornton, of West Hampstead, London, England. He has assigned his rights to John Owden O'Brien, of Manchester, England.

Process for Making Color-Halftones, patent No. 1,264,004, has been invented by Howard Thomas Brown, of Los Angeles, Cal. He has assigned his rights to Edwin T. Earl, of Los Angeles, Cal.

Paul F. Kahler, Chicago, Ill., has invented Photograph Printing-Frame, patent No. 1,264,524.

Finder-Attachment for Folding-Cameras, has been invented by Arthur David Northrup, of Rochester, N. Y., patent No. 1,264,842.

Exhibition of Dr. A. D. Chaffee's Work

One of the most successful one-man shows, held in the rooms of the Boston Y. M. C. U. Camera-Club, 48 Boylston Street, Boston, Mass., was devoted to the work of Dr. A. D. Chaffee, of New York City, shown during the latter part of May. There were thirty-five prints, 8 x 10 and 10 x 12, all enlargements in bromoil and gum. The subjects were largely of scenery in Southern France and Bavaria. Among the most notable prints were the "Chateau of Carcassonne," of which the embattled walls enclosing the imposing towers stood out in bold but pleasing relief against the horizon, with the city below. The several representations of this inspiring subject were impressively picturesque and will linger long in the memory. Other architectural subjects were of Le Puy and Perigueux. They were delightful in atmospheric quality. Numerous street-scenes—narrow lanes formed by tall and quaint buildings—were admirable in their appropriately rich, low tones. These qualities were also conspicuously exemplified in architectural subjects from the old fourteenth century towns of Rothenburg and Dinkelsbühl. In many instances, plain, straight bromide prints were attached to the bromoil and gum impressions to show the comparison in tone and surface-quality, and that, frequently, a crude bromide print invites the beautifying process of either of these mediums. The exhibition was enjoyed thoroughly by members of the Club and their friends, and is but one of a long series of one-man shows that will continue to be held in the rooms of the Club and under the able management of the present exhibition-committee.

A Contribution to the Red Cross

Credit and thanks are due to Mr. Paul M. Elder, of Coeur d'Alene, Idaho, for a beautiful collection of lantern-slides of western scenery, as a contribution to the Red Cross, at Boston, Mass., for the entertainment of soldiers. Any other readers of Photo-Era, who desire to contribute lantern-slides of interesting subjects, human life or outdoor scenery to this end, are cordially notified to correspond with the publisher of Photo-Era Magazine.

An Artist's Endorsement

Tallahassee, Fla., May 7, 1918.

Editor, Photo-Era Magazine,

Dear Sir:

I am in receipt of the portfolio of Aurora Life-Studies and Print-Set No. 300. Allow me to express my appreciation of the artistic work and thought given to these studies; they are superior in every way to the studies of this type which are to be had in Europe, and I find that the value of photographs of life-studies, as aids in art-work, depends upon the care with which such work is carried out.

I shall soon avail myself of your other sets.

Very truly yours,

James Austin Mortland.

WITH THE TRADE

Soft-focus Enlargements

The Photo Shop, 2234 North 29th Street, Philadelphia, announces that it is prepared to produce pictorial results from excessively sharp negatives, whether plates or films. Its enlarging-department is designed and equipped to make enlargements, diffused or "broad," to meet the artistic requirements as expressed by the customer. The operator in charge of this work is not only an expert photographic technician, but an accepted exhibitor at the Pittsburgh Salon. There is no extra charge for diffused enlargements. An interesting and practical booklet on enlarging may be obtained for a stamp.

New Rexo Universal Paper

A new grade of Rexo paper has been placed on the market recently by Burke & James, Inc., 240 East Ontario Street, Chicago. It is claimed that Rexo Universal has a longer scale of gradation and preserves details to better advantage than Hard or Normal papers. There are now four grades and three surfaces of Rexo paper, and they are made to meet all requirements. Dealers or the manufacturers will be pleased to furnish detailed information.

Northwestern Fruit Exchange Prize-Contest Extended to September 1

In the May Photo-Era the Northwestern Fruit Exchange, 90 West Street, New York City, advertised a prize-contest for the best photographs suited to advertise the well-known Skookum Apples. Prizes aggregating $110 were offered and the closing date was June 1. We are now informed that this closing-date has been officially extended to September 1, and we suggest that professional and amateur photographers enter the contest without delay.

Attacking the Enemy's Trade

The setting up of the Department of Overseas Trade by the Government with the principal object of showing British manufacturers the classes of enemy-goods which may be replaced in foreign markets by British-made articles, is a reminder to both producers and consumers of photographic material and apparatus that now is the time to make good resolutions for the future when the happy days of peace are again with us. Necessity has shown the photographic worker of this country that under the stress of war he can do very well with home-made products. At first, a few fastidious people were inclined to regret the loss of certain chemicals and other things of enemy-origin, but as time has gone on, substitutes of a more or less satisfactory kind have been put on the market, or the enemy-goods have been proved to be less indispensable than was thought. Having got the consumer in the habit of using home-products almost exclusively during the war it is now up to the British photographic manufacturer to leave no stone unturned to keep the home-market to himself after the war as far as possible.

The Amateur Photographer.

Focusing-Scales on Cheap Cameras

The focusing-scale on a very cheap camera is not always quite reliable, and possessors of such cameras would do well to check the scale by the following simple means. Measure off the distances corresponding with the graduation-marks along a garden-path, and drive a stick into the ground at each point. When dark fix the camera in position, raising the front to its fullest extent, and get someone to hold a lighted candle at the first distance. Give a two-seconds exposure, then drop the front a little, have the candle moved to the next distance according to the scale, and after focusing for that distance expose again. Upon development if all the images are equally sharp, the scale is obviously correct. If some of the marks are wrongly placed the fact will be made evident by lack of sharpness in the image, and a little further experimenting will be necessary in order to discover where the marks should have been placed.—*The Amateur Photographer.*

What is an Equipment?

The erudite manager of the amateur counter, at a prominent photo-supply house, had just delivered a comprehensive dissertation on the selection of the proper camera and accessories for approaching summer-activities, when an interested individual ventured to ask the speaker how he differentiated between an outfit and an equipment. Looking the hopeful purchaser squarely in the eye, the salesman replied, ostentatiously, "An outfit costs from $2 to $15; an equipment from $50 up!"

Photography a Luxury in Germany

According to one of our cotemporaries in England, photographic apparatus of any kind in Germany is to be subject to extra taxation, viz., at the rate of ten instead of five per cent on all retail transactions.

Advertising Enemy-Products

A recent issue of a prominent German photographic weekly appeared, for the first time in its history, with an advertiser's bargain-list of four large solid pages, offering over 500 used lenses of standard makes, including French and even English. Among the latter were a few lenses by Dallmeyer, Beck and Watson, and also several Kodak Rectilinears—despite the edict against enemy-made products.

This is directly in line with our English cotemporaries, who, though not publishing advertisements of German products, permit them to appear in advertised bargain-lists.

Obliging the Dealer

A long-suffering dealer, over in Philadelphia, recently addressed one of his patrons as follows:

"Dear Sir—Will you kindly send me the amount of your bill, and oblige?"

To this the obliging delinquent replied: "The amount is $110.50."

AUGUST 1918 20 CENTS

PHOTO-ERA

The American Journal of Photography



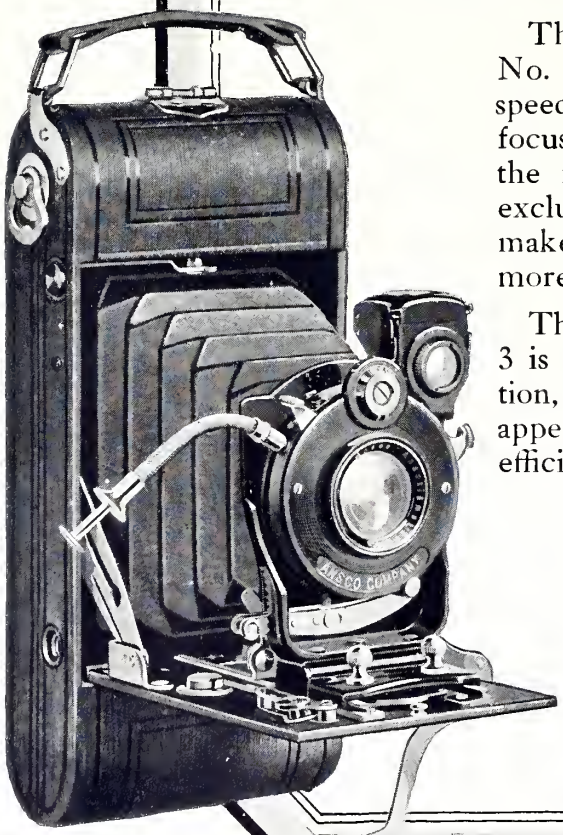
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A LAKE MICHIGAN SCHOONER
B. F. LANGLAND

PHOTO-ERA

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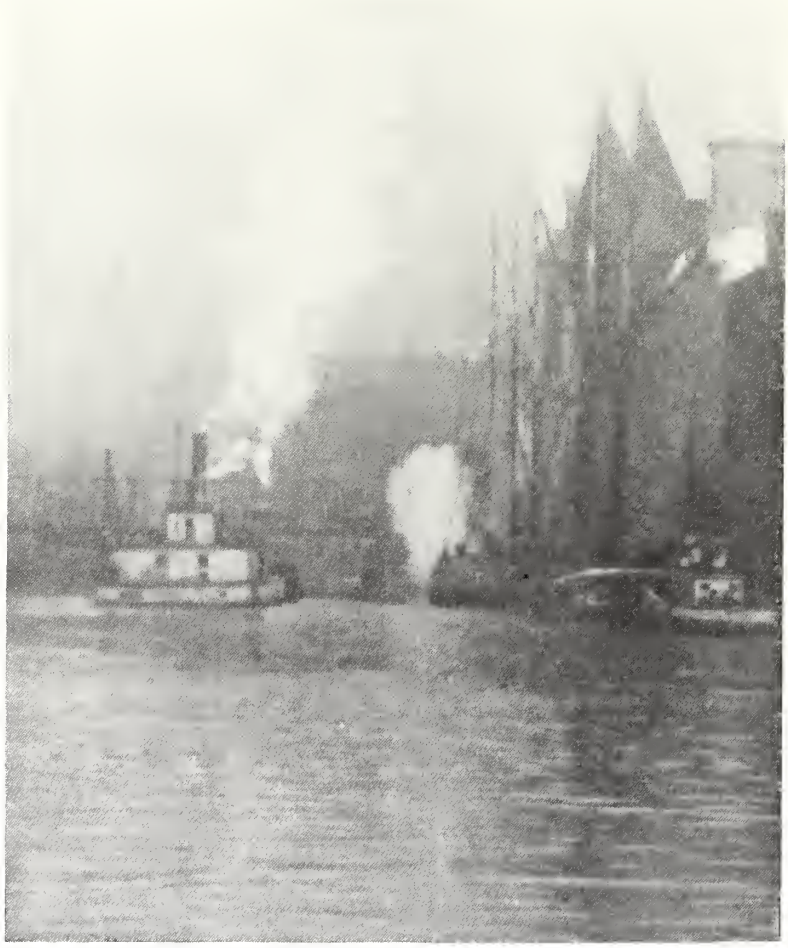
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Alongshore with a Camera

B. F. LANGLAND

ALONGSHORE with a camera! What a host of pleasant recollections it brings to me—memories of tramps about the water-fronts of big cities; of strange odors and smoky vistas; of walks along shining beaches in the early morning, when the sun casts its first radiance on the waters—turning them to molten gold—and of early evenings after a summer-shower, when opalescent clouds are reflected in the quiet waters of the lake; and of brisk and exhilarating "hikes" along shore, when winter's frosts and snows have worked their magical transformation. A few minutes' walk will transport you from a center of civilization into a region of ice and snow—where polar conditions prevail—with huge icebergs set in endless fields of broken ice and arctic scenes all about that make you live the stories of polar exploration you have read. Trips along the shores of Lake Michigan are among the most interesting outings that photographers in search of marine or alongshore pictures can take. Subjects of pictorial interest are to be found on every hand, subjects in every way the equal of those to be obtained at the seashore—bathing-beaches with sunny pictures of laughing children, splashing in the water and romping on the sands, or bathing nymphs in Annette Kellerman suits; pictures of waves breaking on the rocks under stormy skies, or white-winged yachts drifting in the bay; pictures of passenger and freight-steamers coming or going, with long streamers of smoke trailing after them; or an occasional tall-masted schooner sailing by. These picturesque sailing-vessels, so numerous on the lakes in the seventies and eighties of the last century, are now fast disappearing. They have been displaced by the big steam-freighters. Every year sees more of them lying wrecked and abandoned on deserted shores, or grounded in some marine-graveyard to be eventually broken up. They will soon be a thing of the past. Pictures of fisher-folk busy about their quaint homes, boats and other fishing-gear, pictures of shipyards and drydocks, with men at work on many interesting tasks add to the charm of alongshore photography. There are subjects for the camera all about, pictures worth making, pictures visible to those who have learned to see. But alas! how many there are who have eyes and see not! Photographers who excuse their failure to make pictures of interest by saying "there are no subjects of pictorial interest in our neighborhood," and who are under the impression that if they could go here or there, or somewhere else, they would find pictures worth making. They are under "the lure of the elsewhere." The trouble is that they have never learned to see. To have become the possessor of a camera at least augurs the desire to make pictures. Now, the photographer abroad with his camera—if he has not learned to see—is very much in the position of the lady who desired to make a rabbit-pie and was given a recipe beginning, "First catch your rabbit." The photographer must first see his picture. It has been well said that the essential feature of an art-education is learning to see, the primary function of the art-schools being to teach their pupils to see correctly. This, with the manual dexterity acquired by practice, makes the artist. Now, it is not necessary for the photographer to attend an art-school in order to learn to see. He should first acknowledge to himself his lack of the faculty to see the pictorial in his surroundings, then he should determine to overcome this lack. One way to accomplish this is suggested in the following paragraphs.

If your desire is to make pictures along the shore, select a view in your neighborhood that



A MISTY MORNING IN MILWAUKEE HARBOR B. F. LANGLAND

you can visit at frequent intervals. Say that the view selected is from one of the city-bridges. Make a list of the material things in the view. It will be something like this: the water in the river; buildings and wharves on each side; a vessel or boats of some kind passing up or down the river, or tied up at the dock; men at work on the wharf; and the sky above. Make a record-photograph of the scene from your point of view. It may be a picture possibly, but that is not what you want. What you do want is to make a record of the material making up the view at that point. Take your list home, get out your file of the back numbers of PHOTO-ERA, if you are fortunate enough to have one, and if you haven't, be wise and make up your mind to start one at once, for a file of this magazine is an eminently complete and instructive text-book on artistic photography. You will find it liberally and beautifully illustrated, then, pick out the pictures that are made up out of the materials on your list, observe how the artists have made use of them in constructing their pictures. You will find that they have made use of all of them, but in what a variety of ways! One man has seen a picture in the reflection of the buildings and vessels in the water of the river and has emphasized that feature, all the other elements having been subordinated and used to furnish balance and atmosphere. Another has seen his picture in the tall masts and stout hull of the



OPALESCENT CLOUDS AND LAKE B. F. LANGLAND

vessel at the wharf, and still another will have found his picture in the sky above the river with the rest of the material serving merely as a frame or support. You will note that each of the artists has emphasized some one thing, subordinating the rest of the material. Study these pictures carefully, see if your combination of materials can be made to furnish pictures of a similar character, look over your view, item by item, consider how each would appear under the different conditions of light as it changes hour by hour throughout the day, observe how changes in the direction of the light emphasize or subordinate the different parts of the scene, and what an entire change in the appearance of things is made by a change in the weather.

A little intensive study along these lines will make a world of difference in your ability to see the pictorial in your surroundings. You will find new beauty and interest in the familiar things about you; and when you go out with your camera you may hope to bring back pictures in which the characteristic features of the scene have been emphasized and which will not only vividly recall to you the pleasures of the outing, but will convey to others the impressions and emotions felt by you, the artist, when making the pictures.

The pictures that accompany this article were made with several cameras—some small and some large. The experience gained has led to the conclusion that there is no one camera made that will meet all the needs of the "Alongshore Photographer." This is the day of the small camera and wonderful outfits in miniature are to be had. Much fine work can and has been done with these very small cameras, but their successful use requires much more experience and skill than is needed with a larger camera. For all-around use, I would not advise a camera smaller than $3\frac{1}{4} \times 4\frac{1}{4}$, nor larger than 5 x 7. My personal preference is for a camera of the popular postcard-size, $3\frac{1}{4} \times 5\frac{1}{2}$, for the following, to me, excellent reasons:

1. It is small and light enough not to be unduly burdensome to carry about. The photographer of alongshore scenes frequently has

long distances to go to reach a desired picture. A heavy load will make a short road long and a long road interminable. The tired artist cannot do justice either to himself or to his subject.

2. This size is large enough to permit careful focusing and composition on the ground-glass, and affords a contact print from the negative of a size to be of value without enlargement.

3. It is a standard size, and supplies can usually be obtained even in the smaller and out-of-the-way places. Incidentally, having this size camera I was enabled to obtain a number of interesting pictures last fall while on a canoe- and camping-trip in the wilds of Northern Wisconsin. My film-packs had all been used up long before the trip was over. We paddled ten miles down the river to a little village where we found that the only sizes of film-pack on hand at the drug-store—where photo-supplies were carried—was one pack 3¼ x 4¼ and one 2¼ x 4¼. It was a case of, "use these or go without." I used them by inserting a block of wood whittled down to the proper size in the lower end of my film-pack adapter for the 3¼ x 4¼, and the smaller pack by using the same block with the addition of two narrow pieces of wood glued one on each side of the pack to keep it in place. Then, after marking the sizes on the ground-glass with a pencil, off we went, happy again.

The camera for alongshore work should be provided with a bellows of sufficient length to permit the use of the long-focus rear-combination of a convertible anastigmat lens. The long-focus lens is extremely valuable in marine-work, as it is frequently impossible to approach the subject closely. The shutter provided should be a good reliable one, not necessarily very fast—very rapid exposures are rarely needed on alongshore subjects. A light-yellow ray-filter and orthochromatic plates and films should be used; also a tripod, of course, when possible. A good view-finder is an absolute necessity for many shore-pictures, because time and conditions will often prohibit the use of a tripod despite its technical advantages.

Backgrounds for Portraits

THE amateur who attempts portraiture at home is often beguiled into thinking it necessary to imitate some of the conventions of the professional studio, and buys painted backgrounds of landscapes and interiors. He is probably following a very bad example. It is only lack of observation, or else force of habit, that leads people to tolerate some of the backgrounds as they are employed in much professional work.

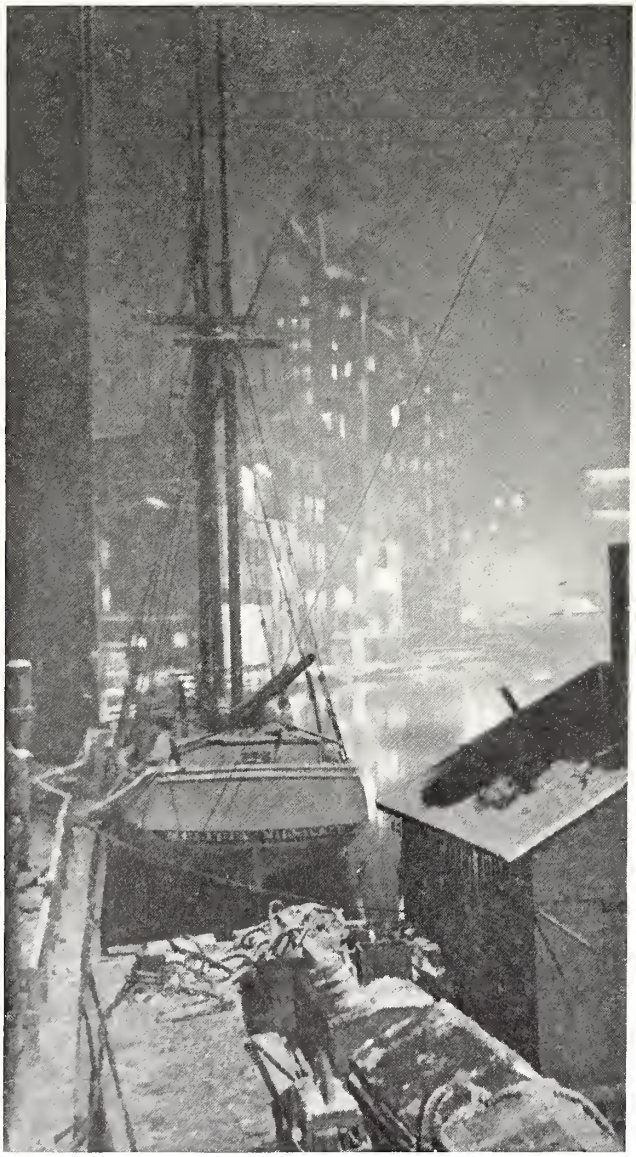
It is still quite a common thing to find in a photograph a painted landscape or seascape ending abruptly in a foreground carpet, on which stands an elaborate chair occupied by the sitter. Or a commonplace person in outdoor-dress is posed before a crude painting of the interior of a baronial hall. These are the last things an amateur pictorialist would dream of imitating. On the other hand, advanced professionals have a wide range of backgrounds—artificial and natural—in their studios, and these they employ with knowledge and skill to suit their sitters and produce a harmonious and convincing result. But here, again, the resources are so elaborate and varied that the average amateur cannot hope to command them. Even the apparently simple accessories of the effective and popular "sketch-portrait" are beyond the scope of many of us. The appropriate background and floor-cloth can be used to advantage only with suitable lighting-arrangements, and both negative and print require modifications that demand considerable skill and practice.

The beginner who attempts indoor-portraiture at home generally confines himself to head and shoulders, or, at the most, half-lengths. He will therefore be well advised, if he uses canvas backgrounds at all, to adopt only those of a flat uniform tint. These are very useful and appropriate for his purpose, and they need be only of such a size as admits their suspension on the wall by means of picture-hangers. A patterned wallpaper is generally unsuitable; but a self-colored paper or a distempered wall of suitable color will serve as a canvas-background.

A picture in the background can sometimes be introduced with good effect, but it requires skilful management. It is also sometimes possible so to place the sitter that the space beyond him is occupied by a darkened room or passage. If the subject is well lighted, the result may be very striking and effective, and the background will actually suggest space rather than a sub-



DRIFTING ON THE BAY
B. F. LANGLAND



THE GLOW OF NIGHT
B. F. LANGLAND



THE LAST MOORING B. F. LANGLAND

stantial barrier. The very antithesis of the plain background may be used in the shape of material with a strong and decorative pattern; but this is suitable only when used in conjunction with elaborate ornamental dress worn by the sitter. It may be taken as a safe general rule that the plainer and more unobtrusive the background, the better.

It is because this rule holds good also with outdoor portraiture that the advice is so often given to avoid such backgrounds as fences, trellis work, brick-walls, and foliage. Whether in sharp focus or not, such details detract from the portrait, because they are too elaborate and complicated, and demand too much attention. Hence the application of such terms as fussy, busy, fidgety, and restless. The head may be arranged to come against a distant mass of shadow, and so stand out in relief against a background that is quiet and natural; or it is sometimes possible to include a peep of simple landscape which is the genuine thing which the painted canvas of the professional aims to imitate. Successful studies of figures have also been made with the sky only as a background; but it is by no means easy to obtain good tone-values in both figure and sky at the same time.

Of course, a plain background can be used out of doors as well as in. It may be merely a plain and suitably lighted wall, a flatted canvas, paper, or unereased fabric of correct tone and texture.

With animals or children out of doors, the artificial background is seldom satisfactory. It is time well spent to look about for a suitable setting which is more natural and appropriate. Lastly, although it is outside the scope of this note, it must be remembered that suitability of background is often of eqnal importance in the rendering of many subjects other than portraits and figures.—F. F. T., in *Photography*.

A Camouflage-Camera

E. L. C. MORSE

ONE of the best pictures I ever made—not indeed artistic, but replete with action and naturalness—was made sitting on a bench in a park with my camera concealed by a newspaper spread carelessly on my lap, while I gazed absentmindedly off into space—seemingly. A certain tree was fifty feet away, and passersby had to pass between the tree and the fence. I saw my man coming down the street: a Mexican peon clad in rags, arrogant, about half drunk with *mescal* and more or less quarrelsome. If he had seen me snapping him, either I should have had trouble with him—for they don't like Gringo photographers in Mexico—or, at best, I should not have been able to obtain the unconscious pose that the picture showed. But the camouflage worked perfectly. Just at the right time I squeezed the bulb between my knees, and both hands were above the newspaper. To the uninitiated "snappee" the "snapper" was doing nothing but smoke and idle his time away.

At another time, I failed disastrously through lack of proper camouflage. Two ladies were bargaining with a street-peddler on a corner. The scene was characteristically Mexican and I wanted to get it. Of course, they spotted me at once as a Gringo, and my camera was very much in evidence. So I boldly made the best of it, and went out into the street—they watching me closely—and pretended to be very much interested in photographing a church down the street. I set my focus for the group on the street-corner, very ostentatiously sighted the church through my view-finder, then turned suddenly and "snapped" the ladies. Too late or too clumsy—my plan had been discovered! Result—a rear view of two ladies and a peddler—an utterly meaningless and useless picture.

The man who gets a really first-class outdoor snapshot of persons has to be a first-class strategist, or else have extraordinary luck. The slightest suspicion of a pose or camera-consciousness spoils the picture. Only professional models can pose for a picture and look unconscious. Most people, hitherto perfectly natural and seemingly in their right minds, at sight of a camera assume an almost idiotic attitude—or even grin into the camera. It is folly to waste a plate in such circumstances.

Sometimes, one can go through the manœuvres to make the picture, and then act as if it had been made and turn away. By suddenly turning around, sometimes one can catch the group unawares and get a fairly good picture; but the chances are that the parties in the group will be ill arranged. It is only by having everything ready—focus, stop and distance—that one can accomplish anything worth while. One simply has got to wait until the persons get into the right position, unconsciously and naturally; but the foreground and background must be in harmony. With a camera openly pointed at your people, this is almost impossible. And that is where the camouflage-camera comes in. The camera is filled and aimed; but the subjects don't know it.

Nowadays, almost everybody knows how a camera looks, especially the folding-kind. One takes the camera out of the case, pulls out the bellows which is often red, putters with the shutter and gives notice thereby to the whole world that a picture is about to be made. For camouflage-purposes, the folding-camera is probably the least efficient. The box-type is much better, and lends itself more readily to disguise. But at present, in this country, the box-type is poorly developed. Its shutter-speed is generally about 1/25 of a second and it has no focusing-arrangement. One has to be content with universal focus. The background consequently may compete with your middle distance in a most embarrassing way, because your lens has a speed of generally F/11 or at best only F/8. You have virtually only one speed and three stops, the value of which is problematical. The English advertise a camera with focusing-devices, varying speed-shutters and the usual number of stops—in box-form. But under present conditions, of course, such a camera is not available for Americans. The problem is how to make the best use of what we have at our disposal.

There are two types of camera: folding and box. There are three types of subjects: the unsophisticated, the moderately sophisticated and the utterly sophisticated or camera-people. The latter have to be left out of calculation in the hope that they will have the decency not to give the scheme away.

If one uses a box-camera, one may carry it frankly as a camera with a false shutter attached to either side or the wrong end. By making a great fuss about getting the picture just right with the false shutter, one can some-



FISHERMAN'S HOME, JONES ISLAND

B. F. LANGLAND



ICEBERG, LAKE MICHIGAN B. F. LANGLAND

times get a good, unconscious picture with unsophisticated people. This picture-making can sometimes be done about your home where everybody knows you, showing girls skipping rope, boys playing ball, laborers at work, etc. Or, good pictures can be got in country-districts—a woman milking a cow, a man pitching hay, etc. But one has to be careful to select persons who are not "camera-wise."

In using a disguised regular camera one has to see to it that the disguise is reasonable, such as a person might naturally use. A man away from home might naturally carry a light overcoat in which a small camera could be carried, or at a picnic he would probably carry a bundle containing luncheon, lap-rug or rubber-coat, or, perhaps, a hand-satchel.

There is considerable room for ingenuity in the disguise; but the operator must have what is known in certain quarters, as a "poker-face," that is, he must be absolutely alert without seeming to be so. The great difficulty is to disguise the end of the camera where the lens is. This can be accomplished by allowing the wrapper, whether coat, paper or whatnot, to protrude slightly over the end of the box, as if carelessly done in a hurry. If rightly managed, this makes an excellent lens-shade; but care has to be taken not to allow this overhanging disguise to interfere with the cone of vision the apex of which is assumed to rest on the lens-center. Of course, arrangements also have to be made to release the shutter unobtrusively. If one is not too near the subject, he can sometimes do without the view-finder, provided he can feel the shape of the box.

The folding camera with its faster lens, better shutter and focusing-device can naturally do better work in varying conditions of light and subject. But in its natural shape, it is a "give-away." Consequently, it has to be disguised for the purposes under consideration. But the grocer or corner-druggist can supply you with a nice, thin wooden box which, with a few alterations, will do. Both ends of the box should be taken out to admit necessary manipulation of shutter at one end; plate, film-pack or roll-film at the other. The length of the box should be a trifle less than the length of the camera with apron extended. This admits insertion of plate or film-pack, or inserting films. A slot will also have to be cut on the side to afford a view of the focusing-scale and to manipulate the knob. You then virtually have a first-class camera which lends itself to camouflage.

This box, however, must be disguised either by some sort of container or by another covering. For the latter, sometimes, the old-fashioned telescope-satchel will do—holes being



THE HARBOR AT DUSK — B. F. LANGLAND

cut as required. Or, a reasonably shabby old leather, or imitation-leather, hand-satchel can be had at a pawnshop at a moderate price, which may be cut adroitly as needed. Provided nothing else is put into the hand-satchel, the folding-camera needs no other covering. But the bottom of the camera must be securely fastened to the bottom of the satchel and the lens must not be too far away from the hole admitting the desired view, for reasons stated above. The satchel should be as shabby as one's self-respect will allow; a nice, new satchel with a hole in it would be suspicious. The hole might be apparently a gash made by the rough handling of a baggage-smasher, and a few other evidences of hard knocks would help matters. If one could be seen ostentatiously taking out a pipe or a pair of opera-glasses, a book or magazine or something of the sort from the satchel, the *raison d'être* of the appurtenance would be obvious to the subsequent victims. A wide-release near the handle of the satchel and a convenient napkin or towel carelessly covering the camera inside would deceive all but the most sophisticated.

The camouflaged-camera requires forethought and skill; but properly used gives results in genre-figures impossible with other instruments. It should, however, never be used near or about any navigable river, dock, warehouse or U. S. property—at least, until this war is over. An attempt to do so would probably land the photographer in jail. I used one last summer on a Mississippi River trip, but I was careful to show and explain it to the captain of the boat in advance, and obtained his permission.

PAINT a man or a woman with the damned "pleasing expression" or even the "charmingly spontaneous," so dear to the "photographic artist," and you see at once that the thing is a mask, as silly as the old tragic and comic masks. The only expression allowable in great portraiture is the expression of character and moral quality, not of anything temporary, fleeting, accidental.

BURNE-JONES.

Professional Mirror-Portraits

WILFRED A. FRENCH

WE have had occasion to criticize mirror-portraits, principally from a technical point of view. The sitter electing to be portrayed before a mirror should be careful to remember that the reflected image is frequently a disappointment, because it does not agree always with the other side of the face—the side towards the camera. Even in the celebrated Rokeby Venus, attributed to Velasquez, the face, supposedly beautiful, because of its graceful outlines, is revealed by the mirror to be devoid of charm or refinement. Why? nobody knows. However, it is possible to obtain a pleasing effect in a mirror-portrait, provided that the side of the face nearest the mirror is, at least, as attractive as the other side, and that, furthermore, all the technical difficulties have been met successfully. In most persons, one side of the face is preferable to the other and that is the side it is suggested be turned towards the mirror. With reference to the difficulties in the management of mirror-portraits, the *British Journal* says: "One of the difficulties is connected with focusing and the lens-aperture. It must not be forgotten that the reflected image is not on the plane of the silvered surface of the mirror, but as far behind it as the real object is in front of it, therefore the focus must be 'divided' so as to secure as even a degree of definition throughout as may be desired, a much smaller aperture being necessary than when the figure alone is taken. For the same reason the sitter must not be too far from the mirror. If that is so, not only will the aperture have to be reduced till a long exposure is necessary, but the reflection will appear too small. This is especially the case if the lens is of rather short focal length. Another difficulty is to be found in the lighting. Very often the lighting which is most suitable for the figure is not so for the reflection, or vice versa; where a full face and profile are to be shown it is usually advisable to let the profile appear in the mirror. Care must be taken not to allow a strong reflected light from the mirror to spoil the lighting of the face. Finally, the pose must be such that both images appear graceful and well balanced, both individually and in combination. The mirror-worker must place himself in the position of the sculptor, whose work to be successful must bear inspection from any point of view. Generally speaking, the mirror should be kept vertical, except when heads are taken, in which case a slight inclination may be advantageous."

Sky in Landscapes

BALD-HEADED landscapes, as they have derisively been termed, are now not often seen at exhibitions of the better class, although they are still painfully frequent in amateurs' albums. Unsparingly as they have been condemned, it is open to question whether the picture with a perfectly blank sky is artistically any less defensible than one in which there are clouds, evidently the result of a separate exposure, which in lighting or in tonality are at variance with the landscape beneath. And such pictures are to be found in places where the blank sky would receive prompt condemnation.

When distinct cloud-forms are to be combined with a landscape from another negative, there are several matters which must have the closest attention, if the result is not to reveal its artificial origin. It is by no means enough to take care that the direction of the lighting of the sky is in agreement with that of the scene below. That is only the first and most obvious coincidence which must be secured. We have to take care also that there are not extreme differences of definition between the two; and especially that the clouds are not more sharply defined than the terrestrial distance, which, for one reason or another, always seems more unreal than when the difference is the other way about.

There is also the angle at which the sky is viewed to be considered. The horizon line should always be included in a cloud-negative, and when printing-in clouds, care should be taken to see that it does not fall very much below the actual horizon-line of the picture.

At least as important as any of the foregoing, is



MIRROR-PORTRAIT
WILLIAM SHEWELL ELLIS

it to get a harmony of tone between the two pictures that we are combining. If the contrasts in the cloud-negative are not in keeping with those in the landscape negative, a false note will be struck. This defect is visible in a great many landscapes in which the sky has otherwise been skilfully printed in. Its most frequent form is that in which the contrasts in the cloud-negatives are too slight for that with which it is combined. Definite cloud-forms of the most marked character, such as those which the photographer most often obtains, are generally seen against a background of blue; and photography, unless special precautions are taken, does not differentiate between the blue and the white to anything like the extent which it should do.

The blue of the sky, even in this country, is of a comparatively dark tone, whereas in summer climes it is still deeper. Even here, when a well-lit building or other light-colored object is seen against it, the sky is very plainly several tones darker than the building. Yet how often does it appear so in our photographs? Far more frequently they are rendered of almost the same tone or even with the sky the lighter of the two.

Some of the most charming effects that are to be obtained in the South are when light objects come against this deep blue; and those who go to Italy or to Africa for their pictures, would do well to bear in mind how much they will sacrifice if they lose these contrasts.

Something can be done in many cases by the device of sunning down, and it would be worth while to make a mask, photographically, when the skyline is a complex one, for use in this process. It is surprising how effective a perfectly plain tone in the sky can be, graduated from the horizon to the top of the picture, but not broken by any cloud-forms. And this can be got by sunning down, if the worker is able to recognize the right depth to which to carry the work. A plain sky of this kind is something quite different from the "bald-headed" effect that is denounced, and it is also infinitely superior to the "bromoil-sky" which now figures so prominently and so unconvincingly in our exhibitions.

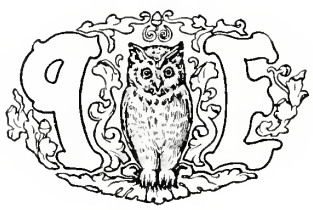
The photographer who finds himself able to convey a true impression of the sky by a few touches of india-rubber on the surface of an oil-print, or can wipe cumuli into his work with the corner of a duster wrapped around his finger, should not be photographing at all; surely he can get his effects much more simply and more directly without the camera. The plain sky, but not by any means a bare sky, we submit, is much to be preferred on all grounds.

W. D., in *Photography.*

Movement During Exposure

Many camera-users have expressed disappointment that they are unable to operate their hand-cameras at slow speed, and that an exposure of approximately one twenty-fifth of a second shows the result of movement. This is due either to lack of steadiness in holding the camera during exposure or to the pulsations of the body, or to both. While it is largely a matter of individuality in holding the camera during exposure, it is true that a small, light equipment is more likely to be affected by a vacillating clasp than a large, heavy apparatus of the reflex type; yet by dint of regular and systematic practice, the operator can acquire a firm and unwavering grip of the camera he is accustomed to use. In the case of a large camera, a favorite way is to support it with the left hand, the right being placed forward, near the release. A small camera is clasped usually in the left hand, the right being free to operate the bulb, or one hand may hold the equipment and release the shutter, the other being used as a support.

Perhaps the most successful method to operate the hand-camera at a slow shutter-exposure—1/25 second or even less—is the one adopted by Mr. W. H. Blacar, and described several times in this magazine. Briefly, it consists in holding the camera, be it large or small, away from the body, with a hand on each side, the end of the antinous or wire-release being held between the lips and operated by the tip of the tongue. The jar imparted to the camera, in this manner, is reduced to the minimum, and, obviously, better definition or longer exposure is possible, whichever the camerist prefers, provided, of course, the subject is not in motion.—W. A. F.





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"LEST WE FORGET"
LEANDER MILLER



"SEE MY TOOFIES!" NATHANIEL E. BROOKS

Making Pictures of the Baby

NATHANIEL E. BROOKS

MY fondest dreams will be realized if every PHOTO-ERA reader, who is a daddy, gets the same pleasure in reading this article as I have had in preparing it. My friends have accused me, time and time again, of being the biggest "crank" on earth when it comes to making pictures of my youngster. This I admit readily, but only smile, for when father is just a memory, sonny will be mighty thankful that dad was such a camera-crank. At least, that is the way I feel and know that I would feel now, had *my* dad been one, too. To those who have not attempted to make a serious and earnest effort to picture their youngsters, I recommend that they start at once. It is an extremely fascinating pastime; and, as I have said, one that will make a very valuable collection in later life. How it will recall every little trick to your fond memory and how good it will seem to live over again these happy, unforgettable, moments!

For this sort of work, a camera of the reflecting-type is ideal; and, if your purse will stand the strain, by all means get one if you want the best results. I use a 3¼ x 4¼ Revolving-Back, Telescopic Graflex, with a B and L Tessar Series 1c F/4.5 lens of 6½-inch focus, and for baby-portraiture I cannot think of anything better. In a recent article, a writer recommended the use of the vest-pocket camera, fitted with an F/4.5 lens and also the reflecting-camera; but he expressed a preference for the smaller camera. To my way of thinking, this opinion should be reversed for several reasons. The main disadvantage of the smaller camera is the finder, it being altogether too small to view the subject conveniently; and serious efforts to compose the picture are thereby prevented. On account of the small cost of the films you tend to wastefulness, snapping several pictures on the same subject in the hope to get, perhaps, one or two good negatives which will enlarge satisfactorily. This is a practice that should be discouraged, especially now that we are at war.



HERE COMES MOTHER! NATHANIEL E. BROOKS

Remember, we should save at every possible corner to help win it. Snapping many pictures works to the manufacturer's advantage at first, for you use film after film; but in the long run it is more costly than if the larger size is used, and the photographer becomes discouraged, ultimately giving it up as a "bad job." With the larger size your work will improve noticeably, due to the more serious thought given each exposure. The expense is kept at a decent figure because you exercise more restraint on your desire to "snap" every little pose. At least, this has been my experience and the advice I owe to Mr. Adolphe Abraham's "The Photography of Moving Objects," in which he says: "I can only say that the quality of my work markedly improved when I changed to the larger size, not only on account of the greater possibilities, but because the care and thought which are bestowed over the exposure of the larger plate make for improved technique."

With the reflecting-type of camera you are able to compose the picture, as the image is seen over the entire plate-area and right-side up. It also enables you to watch the subject and to expose at the moment the desired pose is assumed. Right here allow me to give my readers a little hint. Watch baby for some time on the ground-glass before exposing. Babies assume all kinds of attitudes and your first tendency will be to snap away immediately. But don't do it! Wait until you get just what you want your picture to express. It took just exactly one hour to expose the negatives of the three illustrations; but I consider the results well worth the time consumed. Accessories are very often a great help to keep baby satisfied for long periods like this; and in one of the pictures, my lens-cap was pressed into service very nicely.

The background is very near to the subject in importance. It should be of such a character as not to detract the attention from the main object. The average amateur pays too little attention to this matter, and I have seen many pictures which would have been admirable had it not been that a tree grew out of baby's head or else some part of mother's body asserted itself in the most important part of the print. I don't want to be cruel; but let mother stay at home when you go "gunning" for baby's portrait. Some-



INTERESTED NATHANIEL E. BROOKS

times it's a lock of hair she pushes back and again she brushes out a wrinkle in his clothes; but most generally she wants him to face the camera squarely. This may do for some people; but I much prefer to leave hair where it falls, the wrinkles fully in view and baby looking in other directions than squarely into the lens. Many of nature's settings are most suitable as backgrounds. In our vicinity I make use of a sandbank when "Sonny" is in the carriage, and a clump of shrubbery when he's sitting on the ground. But, again, let me repeat: make the background of secondary nature to the youngster you are photographing. Center all attention on the baby. Don't let the surroundings share equally with what should be the main object.

Most beginners make the mistake to get the subject right in the center of the picture, no matter which way the subject is looking. Try to leave about a third more space on the side toward which the subject is looking and you will be very much pleased by the improvement. As baby-boy is the main object, get him as big in the picture as possible; but do so without approaching too near, otherwise you will cause unpleasing distortion. Here is where the Graflex is supreme, as you can get as close as you wish and at the same time guard against distortion.

Exposures need not occupy the attention very long. It is seldom necessary to give over 1/75 of a second and if you exercise a little care and watch closely, as low as 1/10 of a second can be used without showing any trace of movement on the negative. One of the excellent exposure-meters now on the market will be a great aid to get correctly exposed negatives, and you should never be without one.

Development is another easy matter to take care of satisfactorily. Except in some very special cases, I use the tank-method entirely, and its advantages are too well known to need comment here. The fact that it is used in the large up-to-date studios of the country should in itself commend it to the man who makes photography a hobby rather than his business. Pyrosoda, or a developer containing pyro, suits me admirably. Baby's clothes are always white or of some light color and pyro gives supreme graduations when used on negatives of this sort.

Pictorial Photography As I See It

In Three Parts—Part I

C. W. CHRISTIANSEN

JUST what does pictorial photography mean? This was the question that confronted me some years ago, and doubtless it has proved a puzzle to many rudimentary photographers. Having been a pictorialist for fifteen years and an exhibitor here and abroad, and having had a fair amount of sueeess through hard work and perseveranee, I should like to set forth in these articles various ideas and methods of procedure that might not only be interesting but valuable to the serious-minded noviee in pictorial photography. It is my hope—with the aid of the aecompanying illustrations—to demonstrate just what pietures mean to me and why the exposure of eaeh plate was made.

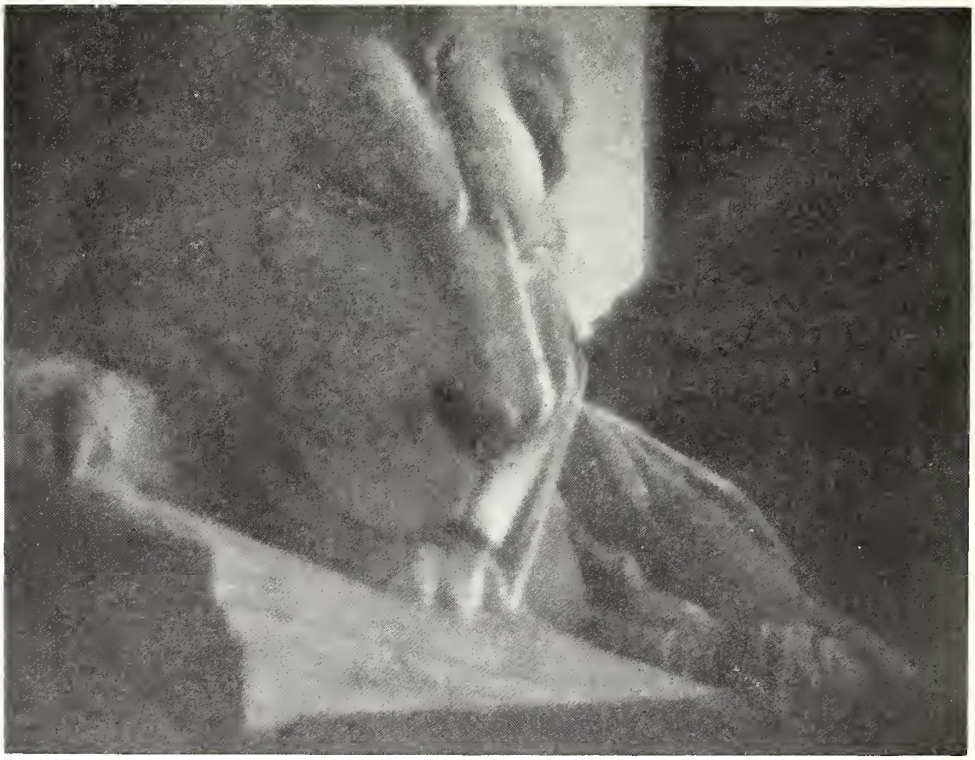
There are eertain factors that eome up for consideration—motive, composition, light and shade, lines and masses. Motive is the appealing power. We must have it. A pieture devoid of a motive eannot live, for that is the medium through which we tell our story and by whieh our work is judged. Technique is also a very essential qualification for pictorialism. It is something that must be mastered before we can become proficient in negative-making as well as in the various printing-methods—eaeh one of which claims its own particular technique.

In speaking of photo-pictorialism, many and diverse are the ways and means to that end. Those who desire to enter the work should be careful to see just what style or form of prints appeals to them most. This may be accomplished by serious observation at exhibitions and through the higher class of photographic magazines. Had I done this in my early eareer, I could have saved much time and money, to say nothing of wasted energy. As my ambition rose, my outfit grew heavier and my pocketbook lighter, by not knowing just how to get at what I wanted. Finally, I was rescued by experienced and talented workers along the lines I had chosen. Hoping that I in turn may be of some service to those who struggle to find themselves, I shall outline my method—an outline of which lack of space forbids a detailed account—of developing and printing. A few words will be said concerning the carbon-process, as that is the one I use entirely for exhibition-work.

It is not my intention to enter into any controversy, whatsoever, regarding the old worn-out subjeet of lenses, sharp or "fuzzy," or of outfits in general. Onee having deeided just what elass of work you will take up proeure the outfit best adapted to it and then you are ready. Do not be misled or eonfused by the "other fellow" who may be unable to see the advantages of your "fuzzy" lens or viee versa; remember that, outside of a very few general rules, there is no infallible standard to whieh to conform. However, always be open to eritieism, but armed with the conviction of knowing what you want, and be ready to separate the wheat from the chaff. I have found that eritieism of my pet print is sometimes bitter medicine to swallow, eausing the temperature to rise under my eollar to an alarming degree; but after thinking it over earefully, trying to see the other fellow's point of view—analyzing it frankly—frequently proves that he is correet. A compromise may result to the betterment of the print. Negleet nothing that may lead to an improved final result. Forget that you made the print; try to look at it from a disinterested standpoint.

In exhibition-work, your print must be convincing. Your story must be told in a simple way, the mood or impression recorded must speak for itself. Always bear in mind that the other fellow did not see the original scene. Through you the message is delivered; you have your say, and blessed are you if your communication be read aright. You will find that to make even a small name for yourself in pictorial photography, you must give it much time. Thought and study, coupled with observation and determination, may bring forth a natural ability undreamed of; so do not feel, at any time, that your labor is too arduous and unproductive. Believe me when I say in all sincerity that you will never regret the time thus spent.

It is perhaps not out of place to mention my own working-outfit, which consists of a 4 x 5 long-focus revolving-back Graflex, two soft-focus lenses, one nine inches, the other eleven and a half inches focus, two ray-filters, a three and an eight-time, and a pruning-knife. These have proven satisfactory and sufficient for my needs. The pruning-knife will be found to be a very valuable requisite; indeed, to remove braneches or weeds or other objectional matter or to transplant small trees and shrubs, it is indispensable. I am not saying that my outfit is the right and



IN REVERENT MOOD — C. W. CHRISTIANSEN

only kind; that must be left to each individual. It is simply my choice after many trials.

My advice to anyone who starts out in photography is to buy the cheapest and most easily carried outfit he can procure and to hold on to it until he has found himself. Many start out by purchasing an expensive equipment and after the first fire of enthusiasm has died down, the camera is laid aside, or, perhaps, sold for a very small part of the original cost. With equipment of less value, the fun is just as keen and in case of disuse the loss is small. This advice also applies to plates, if one chooses a plate-camera. Learn the diameter and use of the plate thoroughly. Do not change from one make to another, for one will find that there is not much difference in the various brands. What can be done with one designed for a certain class of work, can be accomplished with others designed for the same purpose. Obtain one of the pamphlets furnished by makers of standard plates, study it well and decide on the one best suited to your needs. If a fair trial does not satisfy your demands, a change can always be made.

Now, presumably you have made your choice of an outfit and have mastered the elementary technical side of photography, and we are now ready to take up pictorialism, which is a very elastic subject—according to what one observes among exhibitors and others. Do not mistake "faddism" or "freakism" for pictorialism. You will find the field large enough for most of us to conquer without wandering off into fads. Rout the idea that you must produce something *different*. A few square or oblong masses of black and white or a couple of meaningless dots and dashes called, "Approaching Twilight in the Alps," does not make you a pictorialist. Be human and adhere closely to the human-side of things. Select subjects that will appeal to the average mind—something that tells a story and speaks to one's better self, something that will awaken memories of bygone days, something that will let you into fairyland—the land of dreams. This old world of ours is filled with beautiful thought-material, waiting to be caught by you and sent out again in the form of a print—if you have learned the lesson of "seeing."

I have found that in arranging compositions on the ground-glass, the study of light-and-shade

effects has helped me to see beauty, passed unseen by the many who have not so trained themselves. When you take a trip to any of our many beauty-spots, such as Yosemite Valley, the Grand Canyon, or Niagara Falls, it is then that a thorough understanding of composition in light and shade and masses will reward you for all the time and energy you have given it. We have all met people who have spent but one short day at one of these places and really felt that they had seen all there was to see—the wondrous detail, the hundreds of finer and more delicate touches of beauty, wherein lies the magic of these indescribable places, lost completely. So also in the more humble or simple scenes which lend themselves fully as well to productions of pictorial photography, many workers see nothing. The small stream or wooded hillside, easily accessible, will yield many pictorial treasures.

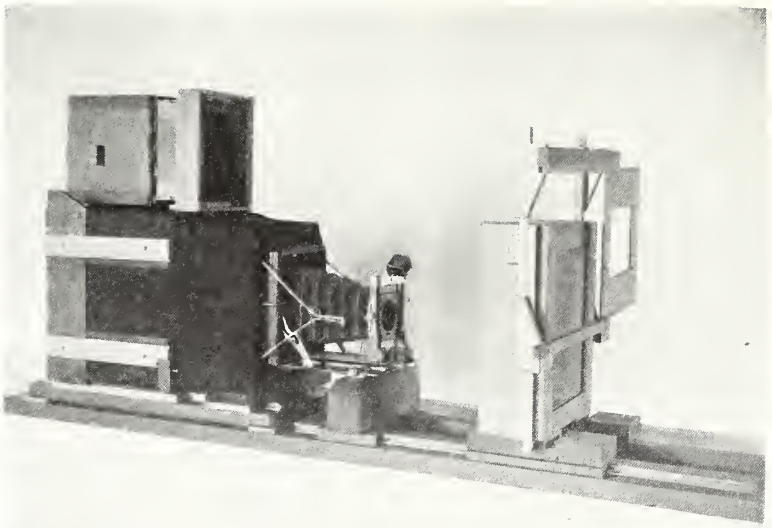
Choosing a printing-method is a matter of choice. It is not always due either to any special merit of the many good processes in question. Gum, carbon, platinum, bromide and many others—each has some special advantage. To be able to print in each and every one is a very useful accomplishment, for certain it is, that some subjects are presented to far better advantage through one medium than through another. For instance, should one desire a sketchy effect, the gum in all probability takes the lead. However, that process does not seem to lend itself very readily to the more subtle, soft tones nor to the gradations in halftones. Now, a "gumist" may take exception to this; but having seen gum-prints galore, I can say conscientiously that I have never seen one yet that contained the charm and tone-qualities found in some of the other processes. After experimenting with various mediums, I have arrived at the conclusion that the carbon-process holds the highest place in my affection. I am not saying that it is superior, but I like it best. Give any process a fair and intelligent trial and it can be mastered; but I am such a confirmed enthusiast with regard to carbon, that this article would not be complete without making an attempt to make the other fellow see some of its practical and other advantages.

This, of course, is not supposed to be a complete treatise on the carbon process, but rather a few reasons why I have chosen it for my printing-method. I feel that a well-made carbon is a joy forever. There seems to be a poetic nature all its own—combined with a decorative quality not found in other mediums—that appeals to me. Regarding carrying-power, none equals it. A comparison of prints at an exhibition will, I think, prove this readily. Another advantage is the various colors which add to one's stock in trade to carry out desired expressions or moods. Then, too, by using the same color-pigment as the print, one can cover up many small defects, tone down highlights as well as strengthen dark parts. This if done carefully will not be detected. We will see that each color seems to have peculiarities all its own. A negative suitable for a blue black would be found absolutely useless for an Italian green, as the latter requires a negative as hard as a rock; and the hard negative would be of no value for any of the other colors, as the highlights would wash off in developing, leaving no halftones and an exceedingly unpleasant result. So we see that the distinctive features of the colors must be mastered to obtain the effect.

Carbon-printing, although a slow, "messy" proposition, requires no particular room nor special, intricate apparatus. It can be manipulated in any ordinary workroom, and, although perhaps daylight brings the best results, artificial light may be used in printing. A good positive must be obtained and this is not always as easy as it sounds. Then the essential point is to have your enlarged negative just right for the color to bring about the effect sought.

To sum up, a practical pictorial working-basis to start from is to know your instrument, plates, developer and printing-medium. Drill yourself in the school of "seeing" and you will have no trouble to steer clear of the sin of copying, which, besides being unfair to the other fellow, is really very unsatisfactory to yourself, in the long run. Then try to remember what caused your failures as well as what brought about your successes, and work, work, work. In the next article I shall try to explain pictorialism as I see it.





ENLARGING-OUTFIT CHARLES A. HARRIS

Daylight-Enlargers and Dodging

CHARLES A. HARRIS.

FOR some time I wondered why it was that its makers had given the ubiquitous hand-camera such a favorable chance to make good, and yet had placed restrictions and limitations upon its working-partner, the enlarging-camera; referring above, particularly, to the smaller sizes of camera and to the daylight-enlarger since, to use the small camera and then enlarge, is a practice now very generally followed by the amateur workers. Not so much an elaborate as a good working-knowledge of the possibilities, as well as the limitations of what we have in hand is, it seems to me, a desideratum. It is just this, in connection with the use of a given piece of apparatus or an optical system, that makes it of especial value rather than merely its expensive nature. Not infrequently, we experience a mild shock to learn that a modest outfit, in proficient hands, has been the medium to produce say, some coveted honor at the salon; although, a prize or honorable mention might, in some cases, represent a combination of qualification plus luck, as there is generally much wonder among the chiefs at the war-council afterwards.



ROSE CHARLES A. HARRIS

Now we are either familiar with the usual methods of enlarging by daylight or, if not, descriptive matter with accompanying line-drawings may be made easily available. One method explained is the use of a darkened room, the camera being fitted to an opening in a shutter at one window and, from this, the image is projected upon an easel. Another system used extensively for small negatives is the cone-shaped box of the Brownie enlarging-camera type as well as other various and sundry designs to enlarge by this same general method. The first referred to, the darkened room, makes use of the camera with its lens and focusing-devices. The second, generally speaking, operates with a fixed focus and is limited to one size image. It is because of the much greater flexibility and wider range of work accomplished,



ROSE — CHARLES A. HARRIS

when using apparatus of this latter kind, that I have thought this arrangement of things which I am presenting and which has proved quite satisfactory in the tests I have given it, might be of interest. The apparatus to which the small camera is attached is essentially a home-made camera. If a view-camera of sufficient bellows-capacity is available, the problem will be simplified, but with perhaps less gratification in the finished results. Our object here, however is to utilize the small hand-camera for enlarging-purposes. In the position shown, there is eighteen inches draw which, with a five-inch lens, is ample for a two-time enlargement and a little to spare, this being the usual limit for the general run of work. Using the extension-box shown on top, the draw is increased to twenty-six inches, enough for a four-time enlargement with this lens, this extension being used, of course, only when a small section of the negative is to be utilized for the enlargement. This selective control, the ability to enlarge any portion of the plate, will be appreciated at once by those who use the box-form mentioned for this sort of work. As a preliminary it will be necessary to obtain, if not already in one's files, a reducing- and enlarging-table compiled by the lens-makers. This will give the necessary extensions for various degrees of enlargements appertaining to the particular lens to be used. A good plan is to mark upon the base the position of the parts for the different enlargements and then it will be possible to make the adjustment roughly before attempting to focus. If planning simply with the object of an enlarging- and reducing-camera in mind, the desired extension could be managed without recourse to the separate wooden extension which I have used. It will be noticed that all the parts are arranged to slide in grooves upon the board to facilitate adjustment

and so become a part of the base, and the outfit can be used readily in any position.

Now, in taking care of the negative-end, it is desirable to have provision made, first for shifting the negative in all directions—much as the paper is shifted to different parts of the easel when enlarging by the darkened-room method. In the latter case, the negative-position is fixed and the paper moved about but, with the proposed enlarging-camera, conditions are reversed—paper is stationary and negative shifted. Secondly, the exclusion of light excepting that which comes through the negative, is important. As will be noticed, there are the four sides of a box and upon the front of these is nailed three sections of grooved material about an inch or so wide. The kind I have found useful is three-eighths inch hardwood flooring-material. This grooved slide, when so arranged, just accommodates a 5 x 7 plate or kit and is used when straight enlargements of the whole negative are to be made. Also when the sliding-frame is used, a 5 x 7 cardboard with an opening about the size of the section of the negative to be projected, is placed in the above-mentioned groove to exclude light except through the negative. In the sliding-frame a square kit is used, seven inches each way, so that the negative may be inserted horizontally as well as vertically. The reason for fixing upon the above dimensions for this grooved negative-holder is because of its being a regular plate-size and to provide a generous space in which to swing the negative for all adjustments. But it should be remembered in this connection that an average lens will cover safely and enlarge only from a negative of the same size used in the camera to which the lens belongs. There may be cases, however, when one might wish to utilize only a section of a larger negative that the small lens would qualify for. I had planned to use some sort of a small clip or a spring clothes-pin on the side cleats to hold this movable frame in position; but the fit proved so snug that it stays in place without the spring. All that is now needed to exclude extraneous light is to throw the focusing-cloth over between the box and the camera before making the exposure or, what would be much better, to tack permanently to the box a suitable cloth of sufficient size, remembering that when making reductions the greater distance is between the negative and the camera. At the opposite end of the arrangement we find the focusing ground-glass upon which the projection is adjusted until satisfactory. I use the regular plateholders for the bromide paper, a sheet of clear glass taking the place of a sensitive plate over the paper and holding the latter flat and smooth. If the glass used does not fill the rabbet

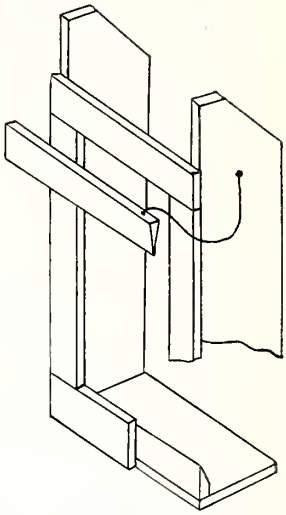


Figure 1. Receptacle for the plateholder attached to camera-back

in the holder, the paper can be brought into contact by backing it with a cardboard of the required thickness. The bromide paper so located under the clear glass it may be necessary for very exact focusing, to reverse the ground-glass; but there is so much depth in these short-focus lenses that, ordinarily, it will be found easy to make sufficient allowance when focusing. In the matter of light-leakage and fog, the same protection is afforded as when using plates or films in regular camera-work; indeed, the whole operation is quite similar.

Photographing a negative—that should sound alluring to those who have not been making their own enlargements. Besides the bromide prints this form of camera is convenient in the process of making enlarged negatives or those which it may be desired to duplicate or improve. Quite a good deal might be done in this direction, a field of endeavor, I believe to be somewhat neglected. Also for reduction in making lantern-slides, providing lens-equipment is suitable. And naturally, something in the way of beautiful window-transparencies would result from or follow such work if the facilities at hand were used. A transparency being a positive similar to the enlarged bromide print, it follows that one would be quite as easy to make as the other. The use of the regular lens and shutter, including stops, etc., is quite an advantage over a fixed-focus affair. Following strictly the rules in these particulars, it would probably be better, for work including the larger sizes, to place lenses that are not symmetrical so as to point towards the paper; but considering the small degree of enlargement undertaken

with this apparatus, I anticipate no trouble with any of the lenses now commonly fitted to these small focusing hand-cameras. It is little else than a copying-process. The average user of the box-pattern of daylight-enlargers, I am inclined to think, gives little attention to the important subject of dodging. Some of the methods employed, however, can be adapted easily to such an arrangement as we are considering. For example, the back-edge of the cloth covering the front-half of the apparatus can be propped up sufficiently so that the operator may see the negative readily by transmitted light and then, with a card held in front of the negative, shading may be done as successfully as when working with a projection upon an easel. The small amount of light, thus entering from behind the lens when operating indoors, will in no way affect the results. It is the strong front-light from out-of-doors that we are more careful to shield.

In the final adjustment of our enlarging- and reducing-contrivance it is desirable to have things centered. First, proceed by making a small red cross in the center of the ground-glass screen. Next, take a piece of cardboard 5 x 7 inches in size and indicate, with a pencil, the center of this. Then cut three sides of a two-inch square that is later to form an opening in the center of this cardboard. With a needle and coarse, black linen-thread stitch two cross threads that meet exactly in the center which has been marked on the card. Cut the fourth side of the square and the center of the card shows in the opening where the threads cross. With this card placed in the groove of the negative-box, it is comparatively easy to align the ground-glass, the lens and the sliding negative-holder at the front.

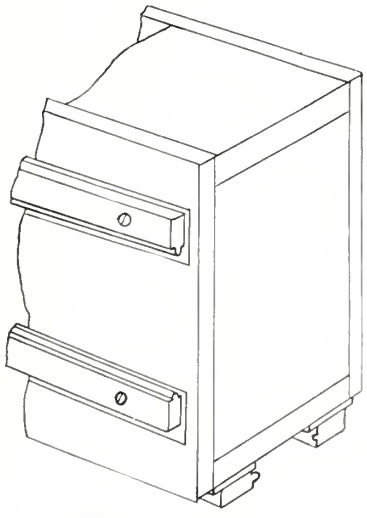


Figure 3. Front of Box

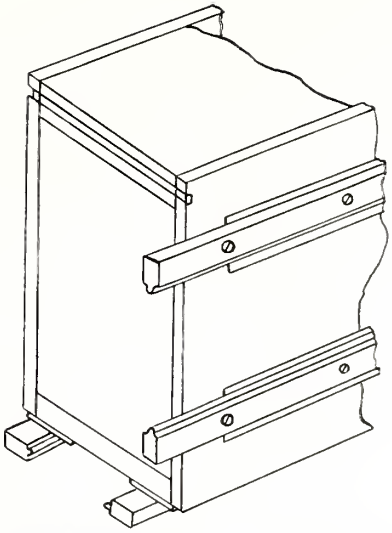


Figure 2. Camera-back of plateholder-size

The following upon the subject of dodging, although taking up only certain phases, may prove helpful to the near beginner. In general, a facility in the application of even well-known rules may add somewhat to the improvement of results.

For equalizing uneven densities in the negative —shading-methods are as simple as any, and with a little practice, quite effective. Usually, in my own case, the image is not sufficiently plain when looked in a frame and viewed from the glass-side to do very accurate work without some guide. Supposing, then, that a corner or some marginal section of the negative requires holding back. The negative is placed in the frame and then, using transmitted light, a piece of black paper is cut so as to correspond roughly with the outline of the thin section. With this paper held in its place, over the negative, it is then creased over two edges of the frame at one corner and, if desired, cut to these creases although I usually leave the paper simply turned down at a right angle. This gives a sheet of paper that, when adjusted even with or over the outer edges at the corner of the frame, just covers the thin portion of the negative. With this guide for the position, the printing goes forward, the black paper being kept in motion with one hand so that a definite line will not be in evidence between the two sections. This is what is meant by the term, shading. If the total exposure is, say, fifteen seconds, keep the paper in place five seconds and remove. About one-third is the proportion I have found to be an average—less for holding back or more for printing out. Occasionally, the thin portion or area to be handled is somewhere in the central part and in this case a piece of the black paper is

cut to correspond in shape with this section but a trifle smaller and kept in a circular motion upon the glass while printing; a couple of long hatpins in one hand being used to hold and move the paper. The exact position can be found, if necessary, by making use of a guide as explained. If a dense central section needs to be printed out, the above process is, of course, reversed and the negative covered with a sheet of paper, a suitable opening in which permits the extra printing for this particular portion. The foregoing relates to cases where no definite line exists between a comparatively dense and a thin section. Now suppose that we wish to print out, say, a window or, perhaps, several of them with definite straight lines which are not to be shaded and when the exact location is not plain from the front of the frame. In such a case, the black paper must first be cut accurately and then held in one exact position during the exposure. The first may be accomplished by pasting a print from this negative upon a sheet of black paper and then, with a sharply pointed knife, cut out the required openings to form a mask. The negative is now held in the frame and the prepared mask is fastened in exact register upon the glass or front side of the negative with a dab or two of paste. Using film-negatives, it will probably be necessary in all these processes to attach the film to the glass of the frame with gummed strips so that a fixed position is maintained. While printing, I hold the paper in good contact adjacent to the openings and, to avoid double lines the frame should not be moved during the exposure. The sheet of paper will, of course, be larger than the negative and extend beyond the inner edges of the frame. After the dense areas have received their extra exposure, the mask is removed, also the traces of paste upon the glass, and a second exposure made for the complete print. Care must be taken in pasting on the mask to preserve an exact register, for any deviation will show very plainly and spoil the print. This method of dodging is sometimes done by placing the prepared mask between the sensitized paper and the negative and after the first printing the mask is torn out. I have tried it and think the first the better way

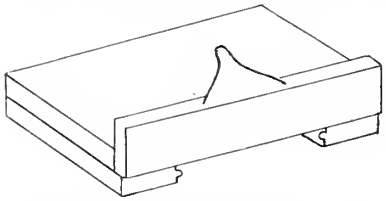


Figure 5. Base upon which the recessed front-board is attached

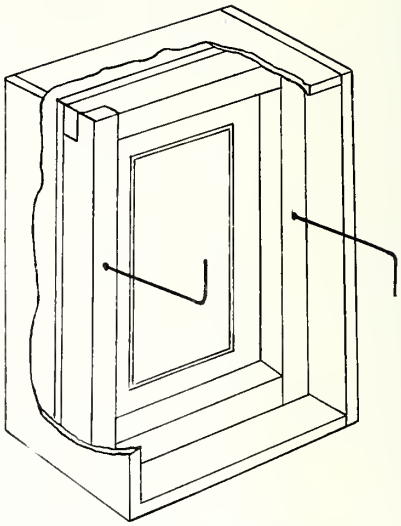


Figure 4. Recessed front to which small camera is attached

because there is danger of disturbing the register of your print-paper and, besides, although a less consideration, a new mask must be used for each print. With care, the mask, used as first explained, can be made to last out a batch of prints. Resulting prints from negatives of uneven densities are generally very much improved by the above or similar manipulation and the game is well worth the candle.

Another feature connected with this subject of dodging is with reference to printing in clouds. Very good results may be obtained with some negatives by blending the sky with the lower picture, using the shading-process, reliance being placed in so overlapping the shading as to produce a tone uniform with the rest of the picture or, in other words, a perfect blend. But let us consider in detail a case where most or all of the horizon presents an abrupt line such as a range of hills or mountains or the tops of houses. In my own work, I have never obtained the desired result in such cases by shading because this definite skyline of the mountains showed a vignetted effect when I generally preferred a clear outline. The following has been satisfactory in my hands. First proceed by blocking out the entire sky portion of the negative with opaque using a finely pointed brush and a reading-glass for the skyline so as to follow this as exactly as possible. This may be omitted if the sky is so dense as to print out white without any treatment. Next, place the negative in the printing-frame and on top a piece of ground-glass, both being brought into contact with one corner of the frame by a slight tap upon the table. With this fixed posi-

tion as a guide for the register which will be used in the same way when printing, trace carefully with a pencil on the ground-glass, the horizon-line and then similarly, as with the sky-portion, paint with opaque the lower part of the picture upon the ground-glass or, if the glass is a large one, a strip of the opaque one-half an inch wide will do, covering the rest with a piece of paper while printing. The first printing is now done as usual, simply taking care that the negative and paper are snugly adjusted to, say, the lower right corner. The negative is now replaced in the frame first with the ground-glass and then the cloud-negative. These, together with the sensitized paper, are adjusted for register as before and the second exposure made for the clouds. Using a glass-negative there will be the thickness of this glass between the printing-paper and the ground-glass so that it will be well to print with a overlap the edge of the negative a little. Although the sky-line upon the ground-glass might, if very simple in formation, be drawn a little low to ensure this blending, I think it will usually be better to follow the first plan, if the line itself is very complicated. The idea is a sort of a dove-tail-joint that will match exactly. If there are masses of trees involved, draw the line upon the ground-glass quite low for such portions so that the clouds may print well in among the scattering branches at the top.

Now, the problem may be one where a church-steeple or the rigging of ships and the like are dominant features of the sky and it is desired to add some clouds. As clouds are or should be printed with a very soft effect as compared to other objects in the picture, the entire sky-area can often be printed over from a cloud-negative and still not be in evidence to the eye where the

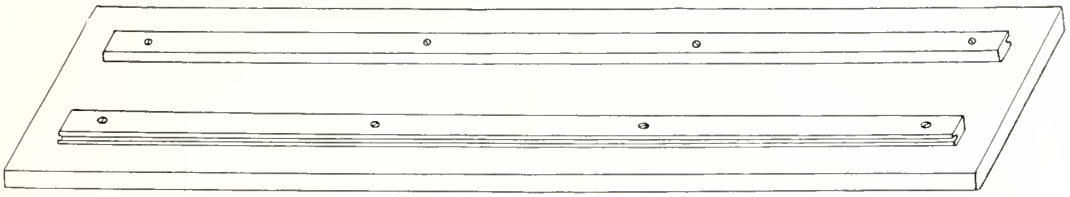


Figure 6. The extension is obtained by connecting the box-front and the recessed front with a light-tight fabric. If nothing else suggests itself, two thicknesses of closely woven black cloth will serve forming, in effect, an improvised bellows

direct light and not move the frame during the process. While I have indicated throughout, for the sake of simplicity, a printing-frame of negative-size, yet in practice I find it much more convenient in all this kind of work to use a frame considerably larger, the glass-negative being held in a central position by fitting it into an opening cut in a cardboard of like thickness. The larger frame will be of advantage when using the cloud-negative, enabling one to shift the latter to bring the desired cloud-formations where they will give the best effect. In this way I have sometimes used a section of a $6\frac{1}{2} \times 8\frac{1}{2}$ cloud-negative in placing clouds upon a $3\frac{1}{4} \times 4\frac{1}{4}$ print. To return again from this digression. If the two printings are in register, the sky and landscape-sections will just unite; but as it is as well to err on the right side and to be certain that white does not show between, when printing the landscape—that is the first printing—lay a couple of small brads between the lower edge of the negative and the inner edge of the frame, the paper being adjusted against the frame itself. This, it will be noticed, results in printing this lower portion of the picture a trifle higher than normal and the two may overlap to that extent. With a film, this might be accomplished by pasting a narrow gum strip to more substantial objects project into this field. This, in case the sky itself is sufficiently dense in the negative to print out comparatively white upon the print. It would not be easy to opaque a sky with fine lines like the rigging of ships or a suspension-bridge, but with the steeple or tower or objects with regular lines quite an improvement can be made by so eliminating obtruding wires and posts. It is not always necessary, in these cases, to print clouds over the entire sky but a small group of suitable clouds may be printed by the shading-process into a section of the sky with excellent effect. A white sky may be given a desirable tint by extra printing, using simply the prepared ground-glass as described for blocking the lower picture. It is, of course, quite important that cloud-negatives shall in form and lighting be suited to the particular landscape, and if such a one is not available it is much better to refrain from adding this feature to your print. I have noticed in foreign advertisements that cloud-negatives are carried by stock-houses and may be obtained in suitable variety for this class of work and it would seem quite desirable that the same condition should prevail in our domestic market, though I have never discovered any trace in such catalogs as I have seen.



George S. Seymour

Let's Take a Trip to Marblehead

GEORGE STEELE SEYMOUR

Let's take a trip to Marblehead,
To Marblehead, to Marblehead,
And see the rocks all rosy red
That glisten in the sun,
The little harbor trim and tight,
The tiny ships, the sails of white,
The glow of many a dancing light
When August-days are done.

Let's climb the rocks of Marblehead,
Of Marblehead, of Marblehead,
And see the fisher nets a-spread
Upon the shore to dry,
The sailor-boys and maidens gay,
The aged men with pipes of clay,
The hardy children at their play
Beneath a cloudless sky.

Let's mount the hill in Marblehead,
In Marblehead, in Marblehead,
And see the rows of silent dead
Who slumber on its crest,
The sturdy fisher-folk of yore
Who brave the tempest's wrath no more
But here upon this rocky shore
Have come at last to rest.

EDITORIAL

Artistic Activity in War-Time

IN his editorial preface of the current issue of *Photograms*, F. J. Mortimer gives expression to the following beautiful sentiments: "What 1918 will bring forth in the way of further pictorial progress with the camera remains to be seen; but while it is usual to speak of the 'arts of peace' in connection with picture-making, we are reminded that actually the periods of peace and prosperity in the past have seldom been the periods of great creative art. It may be that there is some strange stimulus in war which does heighten and refine the artistic powers of the race, though, to be sure, this fact, were it much more impressive than it is, would not outweigh the destruction of the artistic treasures of the past which war involves. But at a time when we are all searching for compensations, it is well if one should be found in the new artistic currents set in motion by the events in which we live. There is something in the atmosphere, an inspiration from the heroism of the hour, a swing away from materialism, which helps to form new ideals and evoke new forms of utterance."

It seems to be true that the creative spirit of a nation's art is never at its best during a period of tranquillity or material prosperity, and that it requires a social upheaval or a tumult of human passions, either in the form of a revolution or actual war, to rouse to action the quiescent energies of a people. History, both ancient and modern, furnishes many examples of periods replete with brilliant achievements due to the stimulating influence of supreme mental stress—war with all its terrible consequences. The desire for noble achievement became contagious, and dormant genius, everywhere, strove for utterance. The warlike period of Pericles produced a Phidias and a Socrates. The arts of sculpture, architecture and oratory flourished in Rome during the Gallic wars when Julius Cæsar was in command. When Florence was convulsed with the feud between Guelphs and Ghibellines, Michelangelo was sculpturing his "David" and the "Tombs of the Medici," and erecting fortifications in aid of the city's defense. The French Revolution—amidst revels of cruelty and bloodshed—produced a galaxy of heroes, artists, orators, scientists and military leaders that filled Europe with wonder and admiration. Think of a people that in the most untoward circumstances gave to posterity such illustrious names as Charlotte Corday and Rouget de Lisle; David and Houdon; Mirabeau and Carnot; Lavoisier and Arago; Marceau and Dumouriez! Later, when the German people were engaged in the struggle for freedom from Napoleon's tyranny, their Beethoven wrote immortal symphonies and their Schiller inspiring dramas—works, the enjoyment of which is shared by the entire civilized world.

Who knows but that in the chastening of this nation's spirit, in what may prove to be the supreme test of its moral and spiritual ideals—during the present war—the American people may not develop a truly national school of art and music, forming, perhaps, as brilliant an era of achievement as any of which Europe may boast.

Injuring the Eyes by Photography

WHEN one sees so many veteran photographic workers, in both amateur and professional ranks, suffering from astigmatism, one wonders what is the actual cause of this distressing optical defect. On inquiry, it will be found that in many cases the eyes were strained during the early days of dryplate-photography, when the plates—then coated with a very slow emulsion—were handled, and examined during development, by the light of a deep ruby oil-lamp. Amateurs at first used advisedly a small pocket-lamp, and undoubtedly incurred serious injury to the sight. Later—thank goodness—light of greater volume was employed, ruby light being also superseded by orange light; preferably fabric instead of glass being used to expose the dryplates sparingly to the rays of this brighter light. Now the photographer confronts the danger of ruining his eyes from exposure to the electric arc when used for printing-purposes. To look at the bare arc is obviously injurious to the sight. Arc-rays reflected from the surface of the negatives are also bad for the eyes. A good plan is to use a printing-lamp in which only reflected light reaches the negatives, or to use a printing-cabinet in which the arc is enclosed, care being taken to cover up empty spaces with pieces of cardboard so that the arc or its reflections do not reach the printer's eyes, injury to which is usually not apparent until the next day.

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, or artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards — Miscellaneous Competition Closed May 31, 1918

First Prize: Ray Trowbridge.
Second Prize: D. W. Ross.
Third Prize: Forman G. Hanna.

Honorable Mention: W. G. Adams, A. C. G. Allison, F. E. Bronson, Fannie T. Cassidy, J. Louis Cunningham, Louis A. Dyar, Winn W. Davidson, Alexander D. DuBois, George W. French, Glenn L. Gebhardt, Norman C. Hussey, Irving S. Lovegrove, Kenneth McFarland, Leander Miller, Florian Mitchell, Louis R. Murray, Gregor H. Najarian, Alice J. Platt, W. E. Potter, E. M. Pratt, J. Herbert Saunders, Kenneth D. Smith, G. R. Smith, Henry Strutzenberg, Lena M. Tewkesbury, A. S. Workman.

Subjects for Competition — 1918

"The Spirit of Spring." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Flashlights." Closes December 31.

1919

"The Spirit of Christmas." Closes January 31.
"Still-Life." Closes February 28.
"The Spirit of Winter." Closes March 31.
"Rainy-Day Pictures." Closes April 30.
"Miscellaneous." Closes May 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

To Photo-Era Readers.

THE Publisher earnestly requests the readers of PHOTO-ERA to give the preference of their patronage to goods and wants advertised in PHOTO-ERA; for no advertisement, whether large or small, is accepted unless it is trustworthy in every respect. This should be of vital importance to all buyers of photographic material, amateur and professional.



TWILIGHT — RAY TROWBRIDGE

FIRST PRIZE—MISCELLANEOUS

Advanced Competition—Outdoor-Genres Closes September 30, 1918

THIS is eminently the season of the year for outdoor-genres. Warm weather and sunshine have attracted thousands of vacationists to the mountains and to the seashore. Those who cannot leave the cities, obtain what solace they may from week-end trips or from visits to parks and recreation-centers. Whatever his status in life, the ambitious camerist does his best to spend every available moment out in the open. Because of this, we believe that the present competition is timely and of value.

Before sending in prints, it might be well to look up the definition of genre. Roughly, we all know what the word means; but in this competition it is essential that we understand its exact definition, otherwise contestants may face bitter disappointment. My reason for emphasizing this point is to make clear that outdoor-portraits, landscapes, groups, etc., are not acceptable no matter how technically perfect they may be. According to Webster, "a genre is a style of painting, sculpture, or other imitative art, which illustrates *everyday life and manners*." Do not overlook this point. Some outdoor-portraits *may be* genres; but a true genre could never be a strictly technical outdoor-portrait because a genre-portrait is usually more spontaneous and true to the life than a formal portrait. It shows the subject smiling or even laughing seated, perhaps, in a boat, hammock or motor-car. In short, an outdoor-genre should depict the subject—be it man, woman, child or pet—as the camerist finds it. Contestants may take my word for it that to make a good outdoor-genre—portraying the subject as it is found and, at the same time, with due regard to pleasing composition—requires no mean skill. It is a severe test of skill, and this competition should appeal to ambitious camerists on that very account.

Those workers who intend to enter this competition will do well to plan carefully. By that I mean to decide upon one type of outdoor-genre and concentrate on that to the exclusion of all others. Obviously, those camerists who are at the seashore should not attempt to depict rural life, and those in the mountains should not attempt subjects of a marine-character unless they are near a very large body of inland water. Make the most of what is at hand. Do not force the issue. Take the subject as it is found and with individual brain-power and technical skill make it a beautiful picture. Suppose the camerist decides to devote himself exclusively to an *habitué* of the country post-office. First, it requires diplomacy; second, many attempts; and, finally, great care to select the print which best portrays the subject and expresses that which was in the mind of the camerist. In fact, it might require an entire summer-season to obtain the right subject amid the right surroundings. Lest I be misunderstood, let me say that I do not infer that the camerist should use roll after roll of film or dozens of plates to obtain just the right result. What I do mean is that *whenever* he has this competition in mind, let him stick to the one type of outdoor-genre; at other times, let him photograph other subjects that appeal to him. However, in all camera-work, this season, let us remember to use our photo-supplies to the best advantage and not to waste one plate or roll of film. Remember, this country is at war and waste of any kind is tabooed.

The supply of outdoor-genres is unlimited. Whether these genres are made into successful pictures, rests entirely with the camerist. Children at play, harvesters at work in the fields, dairymaids, fishermen,

scissor-grinders, peddlers, traffic-officers, gate-tenders and ferry-men; also relatives, friends and pets—all are possible subjects for excellent outdoor-genres. The list is inexhaustible. However, remember the definition of genre and see to it that each picture "illustrates *everyday life and manners*." For example, no farmer in his senses puts on a "boiled shirt" when busy about his "chores." To portray a farmer "all dressed up," when he is supposed to be hard at work, hardly "illustrates everyday life and manners" on the farm. Every outdoor-genre must be consistent in its portrayal of type and surroundings. Any attempt to camouflage an outdoor-genre is very likely to prove disastrous, artistically, and to the contestant as well.

These war-times offer many opportunities to portray the "spirit of the times" as expressed by our friends and neighbors in the community. A mother or wife shown knitting busily and a service-flag strongly in evidence, bears eloquent testimony to the sacrifice so many have made and are making to win the war. Such a picture, handled properly, would have great dramatic force. Another, might be one showing a soldier or a sailor coming home on furlough or leaving to rejoin his unit. Pictures of a military character need not be necessarily sad. The newly commissioned officer, home to show his mother his shoulder-straps, could be made into a delightful outdoor-genre. These are merely rough suggestions; no doubt, many camerists have better ones. If so, let them get to work without delay.

Although military and naval life has become more and more a part of our daily activities, there still remain many peace-time subjects of universal appeal. The vacationist, traveler, sportsman, "week-ender" and permanent resident who owns a camera and knows how to use it, can make delightful outdoor-genres. There are many bits of human nature that may be caught by a skilfully camouflaged camera. The article, "A Camouflage-Camera," by E. L. C. Morse, in this issue, contains many valuable hints. To be a success, an outdoor-genre should never convey the impression that "posing" was employed to obtain the effect. There must be spontaneity and fidelity to truth in every good outdoor-genre, otherwise, it will be cold, artificial and uninteresting.

This competition will enable owners of vest-pocket and other small hand-cameras to use their equipments to the best advantage. Obviously, it will require much skill to make a good outdoor-genre with an 8 x 10 view-camera on a tripod. So much display of photo-paraphernalia is likely to make the subject "camera-shy." The more unobtrusive all genre-photography is made, the better is the result. Even professional models find it very difficult to gaze unflinchingly into the gaping maw of an 8 x 10 studio-lens and "register" spontaneity, unconcern and easy relaxation. How much more difficult must it be for some simple country-maid or hard-working farmer. Speed is an asset. The quicker the picture is made—with due regard to exposure, focus and composition—the better the subject will like it and the better the chances are of ultimate success. Prolonged "arranging" of the subject or background should be avoided. The camerist should train himself to "size up" a situation quickly, to decide whether subject and surroundings meet his requirements, to make the picture and to go on his way without attracting undue attention to himself or to the subject. This competition should be one of the very best that we have had. Let every camerist do his share to make it so and to give us all pleasure.

A. H. B.

Photography in the Rain

Wet weather is often an inducement rather than a deterrent to the ambitious photographer. R. M. F. in *The Amateur Photographer* tells how to protect the camera. It is not so widely realized as it might be among photographers that rain need not in any way be considered as making out-of-door photographic work prohibitive. Many subjects may be safely said to be at their best in wet weather, and beautiful effects of atmosphere are easily obtained, although perhaps it is hardly necessary to mention the value of wet streets and pavements to the town-dweller. A word may be said here, however, upon the adequate protection of apparatus, the chief difficulty with many workers; this is regarded as somewhat of a difficulty, but it is really quite an easy matter. The present writer was recently using an Ensignette camera outdoors in the rain for a whole day with not the slightest ill-effect upon the instrument. The plated parts of a metal-camera demand the most attention, and these were wiped over previously with a soft rag moistened with just a trace of sweet oil. Upon arriving home the instrument was opened and set out for twelve hours in a warm room to dry any damp upon the bellows thoroughly. In the case of a wooden camera upon arriving home the instrument should be wiped over and set out in a warm atmosphere to get dry before being closed and put away, as if put away damp the wood may swell and so cause trouble from swollen joints. When operating a camera in the rain it may be added that the lens should be examined just before the exposure is made, and any damp or raindrops removed with a soft handkerchief, as a "misty" lens will produce negatives that have all the appearance of fog.

Copying Engravings

According to H. J. R. in *The Amateur Photographer*, photographers are often asked to copy an etching or engraving that is prized on account of its age. Very often, the antiquity of the original is accompanied—and, in a sense, vouched for—by yellowish stain on the paper. If this is not uniform, but appears in splashes, so to speak, even an orthochromatic plate will not always suffice to eradicate the disfigurement. There is a simple and very satisfactory method to remove the stain from the original, but the whitening of the paper naturally depreciates its value as an antique. However, the method may be tried in cases where the above objection is not considered to outweigh the advantage of a clean photographic copy. The engraving is to be soaked in a ten per cent solution of potassium carbonate until the paper is well saturated. The solution is then poured off and some peroxide of hydrogen—the usual "20-volume" strength—is poured into the dish. After the effervescence has subsided, the paper, now white and clean, may be washed in several changes of water and well dried. [A safer method, if the engraving is a valuable one, is to use a panchromatic plate and suitable color-screen.—Editor.]

Latent Images on Glass

The present necessity to use old negative-glasses for the preparation of new dryplates has drawn attention to a matter that, in previous days, was only a curious phenomenon of no practical importance. Sometimes when an old negative-glass is used for re-coating, on subsequent exposure and development the image of the original negative reappears along with that produced



THE MARAUDER — D. W. ROSS

SECOND PRIZE—MISCELLANEOUS

by the new exposure. The effect is rare, fortunately for the dryplate maker, though Mr. C. W. Waggoner has found it to be comparatively common when the old glass is used for silvering-purposes. This, however, is an extremely delicate test, far more so than that of re-coating with emulsion; and so the 5 per cent of instances that he has quoted is far in excess, we believe, of the number of cases noted by the users of dryplates. Mr. Waggoner's test shows that no chemical clearing-methods will remove the latent glass-image, while even annealing the glass has no effect. It is clear then that the image is not a superficial chemical deposit, nor yet an effect of strain in the glass. His suggestion that it is due to the gelatine tearing the glass-surface we do not, however, quite follow, for while this would undoubtedly affect a mirror-surface, it is difficult to see how it would affect an emulsion. The whole effect is very mysterious, and we do not know when it occurs; whether during exposure, development, drying, or after treatment. Probabilities seem to favor after-treatment as the cause. Intensification with mercury or lead, or possibly the use of formalin, but again the nature of the developer is another possible factor.

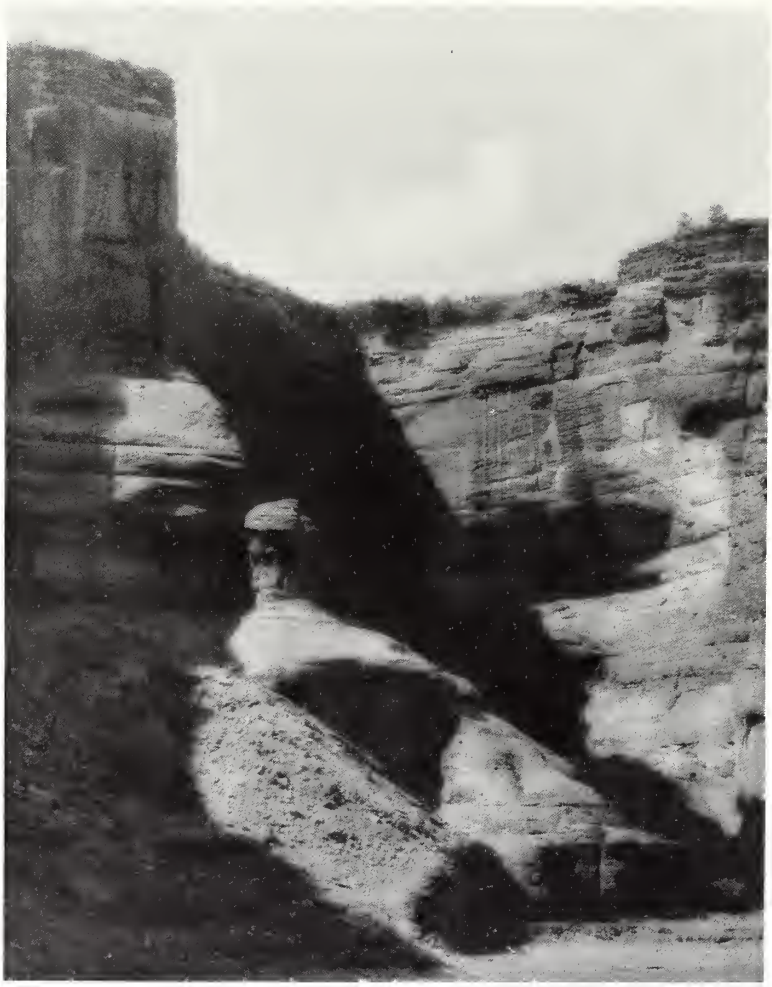
British Journal of Photography.

Weak Bromides

It sometimes happens that a bromide print or enlargement of otherwise good quality has to be rejected on account of its being a little too pale, and with the price of bromide paper on the up grade a hint as to how to save not only the cost of paper but the work of making another copy may not come amiss. The chromium intensifier is particularly suitable to deal with such prints, its cost is infinitesimal, and the labor involved trifling. The print is bleached in a solution of bichromate of potash containing 50 grains in 10 ounces of water, to which is added 10 minims of pure hydrochloric acid; the quality used to clean platinum-prints answers well. After bleaching, the print is washed until all yellowness disappears from the highlights. This operation is done preferably in weak daylight. When the stain has gone the image is re-developed with an ordinary amidol developer, which may have been previously used for other prints. Development proceeds rather more slowly than in the case of developing an ordinary exposure. Five minutes' washing is all that is necessary after development; no fixing is, of course, necessary, as all the unaltered silver bromide has been already removed. We have also found Mouckhoven's intensifier very useful with very weak prints, but as the bleaching is effected with mercury, there is much doubt as to the permanency in so thin a film.—*British Journal of Photography.*

Titles

The choice of titles for pictorial photographs is largely a matter of taste. In competition or exhibition-work some form of title is usually considered necessary, though this is not always so in the case of pictures which remain in the private portfolio. The use of well-known quotations from prose or verse is in many cases an affectation, but where the picture makes its appeal to sentiment, and the impression fits in well with the poet's thought, the use of such a title may be strikingly



SCULPTURED CLIFFS — FORMAN G. HANNA

THIRD PRIZE—MISCELLANEOUS

effective. In general the aim should be to use the title to finish the appeal of the picture, and for this a simple and concise phrase will carry most force. It is this quality of forcefulness that largely determines the value of the title, and not force alone, but point, the title being the culmination of the message, completing and unifying the whole. In a certain class of press-photography much depends upon the choice of descriptive matter, and indeed it may often be said that the title sells the picture.—*The Amateur Photographer.*

Fixing a Color-Filter to a Small Camera

Now that the small vest-pocket camera is an almost universal instrument it is a matter for regret that in many cases these instruments possess no hood to the lens to which a color-screen could be attached, as is done with the larger sizes. As increasing numbers of workers are using orthochromatic plates, and roll-film is almost entirely made possessing this quality, some means of attaching the screen becomes a necessity. The present writer possessing a camera of the type mentioned, and being desirous to use a screen, adopted the following plan. A piece of Wratten's K filter, unmounted, was obtained, and this attached with four pieces of adhesive tape to the inside of the front of the camera, close to the back half of the lens. After some use, it seems the best possible position. Of course, in the use of a roll-film camera the screen must be placed in position before the camera is loaded, and must remain until the film is wound off, and care must be taken not to forget its existence when exposing, and to allow a longer time accordingly; but as most workers who use a screen are of a serious turn of mind with regard to things photographic, this is not likely to be the case. To remove the screen a gentle pull is sufficient, and with a plate-camera this may be done at any time.—*The Amateur Photographer.*

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY

Astronomical Photography with a 3A Kodak

When a Kodak is exposed to the starry sky, the negative will show trails of the stars due to the rotation of the earth during the exposure. Good trails of stars, as faint as the fourth magnitude, can be attained with exposures of 10 seconds up, working at F/7.7. The only effect of lengthening the exposure is to increase the length of the trail. A good snapshot-image of the moon can be obtained with a Kodak, showing even some lunar detail. For good results in photographing the stars and the moon, very accurate focusing is necessary. This can be obtained only by taking a number of pictures with focusing-scale set at a number of points differing by one millimeter, as unless one takes such a series of photographs, one is never sure of a perfect focus.

F. E. Ross.

The Elliptical Appearance of the Sun

Incorrect drawing or distortion in photography is a fault often found, even in pictures produced occasionally by certain photo-pictorialists. Architectural subjects, when photographed with the aid of a wide-angle lens, are very apt to show the effects of exaggerated perspective, particularly at the edges. Thus, a circular-shaped object near the margin of the picture will appear distended or distorted, which in reality represents violent perspective. This unpleasing appearance can be overcome by the use of a lens of longer focus. The individual who severely criticized a summer-landscape, done by a well-known pictorialist, because the form of the setting sun—which was very near the horizon and also near the center of the picture-area—appeared elliptical instead of round, probably did not know that this photograph was a truthful representation of nature, at least, insofar as the shape of the sun was concerned. At the time the exposure was made, the air, being dusty and hot, acted very much in the manner of a reading-glass. For example, a small circle drawn on a sheet of white paper, and viewed through a large double-convex reading-glass, will appear normal in shape; but when the magnifier is moved or tilted, the circle will appear elliptical. The sun, as it approaches the horizon, and appears enlarged, usually assumes the form of an ellipse—longer in breadth than in height, because it is seen through the edge of an aërial lens. The enlarged appearance of the sun is generally an optical illusion due to the solar disc appearing close to the horizon, which we know to be very far distant.

An Extemporized Changing-Bag

When a darkroom is not available, and it is important to change plates, or perhaps to open a magazine-camera to remedy a jam, a changing-bag can be extemporized very easily. The slides or camera are laid in position in the middle of a table and covered over with a large ulster, which should be so arranged as to bunch up a little in the middle. Round the edges of the ulster, books, boxes, or other heavy objects should be arranged to press it down upon the table. Then, by inserting the hands through the sleeves, we can get at the apparatus and do to it anything that may be necessary, working by the sense of touch, without any light getting to the sensitive materials at all. If there is any doubt about the light-tightness of the material of the ulster a rug may be thrown over the whole; but if the arrangement is indoors it is not likely that any harmful light will get through material and lining. In this way I have changed a dozen plates in a magazine-camera many a time, and once out of doors on the flat top of a tomb. I should always prefer to have recourse to it than to the use of a strange darkroom with a light, the safety of which I had not tried. T. Alexander, in *Photography*.

A Note on Storing Sensitive Material

At the present time, when everything that tends to waste in any form is to be avoided, it behooves all workers to take especial care in the storage of their stock of sensitive material, even though they possess only a small quantity. Of course, the ideal way is to purchase only enough material for use at a certain time, and though there is much to be said for this on the score of freshness, many workers do keep in hand more material than they require for immediate needs. And that this may be retained in a good working-condition care must be paid to the question of a suitable place for storage. "Keep in a cool, dry place" used to be printed on certain plate-boxes, and this about describes to a nicety the best conditions of storage. Damp in any form is to be avoided, and this is the greatest enemy to the sensitiveness of the photographic plate or film. Yet we have known workers who keep these in a cold, damp cellar which serves them as a darkroom. Another bad place in which to keep sensitive materials is the top shelf of a room, and more especially if gas is burnt in the room. Heat also has a bad effect, especially upon films. Any place which also is in the near vicinity of chemical products is also to be avoided, and possibly the best that could be chosen is a drawer in the living-room not too near the fire. After exposure the sooner the exposures are developed the better, especially in hot weather, and this is still more important in the case of film than when plates are used, as with the latter, time has but very little effect upon the latent image. The average worker is not likely to put the modern materials used in the production of photographs to any test not well within their keeping-powers, as all plates and films keep well, except the panchromatic, and to a lesser degree the orthochromatic emulsions. These we have found to be considerably slower when old, especially if the box has been opened. Bromide and gaslight-papers also have very good keeping-qualities, and the same may be said for printing-out paper, though not so with the self-toning emulsions. This, however, does not apply to all brands of self-toning papers on the market, some showing excellent keeping-qualities in spite of the delicacy of their emulsions. But the same care in storing is always called for.

The Amateur Photographer.

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $5.00.
Second Prize: Value $2.50.
Third Prize: Value $1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous";*** but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than one year's practical camera-activity, and without any practical help from friend or professional expert. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4}$ x $3\frac{3}{4}$ to and including $3\frac{1}{4}$ x $5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition
Closed May 31, 1918

First Prize: A. J. Voorhees.
Second Prize: George P. Eaton.
Third Prize: Matti Antila.

Change in the Beginners' Competition

THE Publisher is fully aware that the character of this competition calls for a change. By having permitted workers to enter prints here that have never been in a competition elsewhere, he has given a generous scope and wide interest to this competition, which appears to have won general approval, judging by the number of participants. Of late, however, the pictorial standard of contributions to this competition has been of a very high order—so much so, indeed, that real beginners have been crowded out.

In future, this competition will be limited to actual beginners, but not to those who have been using their cameras only a few weeks. Competitors must have had some really practical experience in pictorial selection, developing and printing. Those who make only the exposures, entrusting the photo-finishing to others—friends or professional experts—are not eligible; neither are workers of over one year's camera-activity. Past and future participants who have won a first prize in the Beginners' Competition automatically drop out, but may enter the Competition for Advanced Workers. The three prizes, offered in the Beginners' Competition, will be continued as heretofore.

Improved Bromide Enlargements

THE appearance of bromide enlargements may be improved by rubbing the surface with a solution sold for the purpose. A good home-made solution is prepared as follows: one ounce of beeswax dissolved in four ounces of turpentine. Sometimes a little oil of lavender is added to neutralize the unpleasant smell of the turpentine. The solution is rubbed over the mounted print with a piece of flannel, but evenly so as to avoid streaks. If the latter should persist in making their appearance, the print may be warmed slightly near the radiator or the fire, and the process of rubbing renewed until they disappear. This process brings out the richness of a bromide enlargement, particularly of one that is sulphide-toned.

A Salon Contributor's Acknowledgment

My dear Mr. Beeson:

Thank you for returning my prints from the Pittsburgh Salon in *such good condition.* Having just received some pictures from another exhibition in *an absolutely ruined state,* I appreciate *the care with which the committee of your Salon has handled my work.* I will be glad to send prints to Pittsburgh in the future. I am sorry not to have been able to see the exhibition.

Very sincerely yours,

EMILY H. HAYDEN.



"WHEN THE TOIL OF A LONG DAY IS O'ER" A. J. VOORHEES

FIRST PRIZE—BEGINNERS' COMPETITION

Beginners and "Our Illustrations"

EDITORIALLY, and otherwise, we have often called attention to the department, "Our Illustrations." We have not done this in a spirit of self-praise, but rather because we have ample evidence to prove that this department is of great practical benefit to the average reader—particularly to the beginner. Unfortunately, it seems to slip the attention of most beginners that the department, "Our Illustrations," is of interest to them. For some reason, they appear to assume that the criticisms and data are beyond a poor tyro's comprehension. On the contrary, the information furnished gives interesting, practical facts about the very things which concern beginners the most, viz: cameras, lenses, exposures, stops, ray-filters, plates, films, printing-papers and developers. Even if the artistic criticism of a picture should be above the beginner's head, he can grasp readily the fact that the picture was made with a folding-camera, postcard-size, exposure of 1/25 of a second, stop F/8, on roll-film and printed on gaslight-paper. This data may prove to be the very help needed to make success out of repeated failure. Remember, the man who has been kind enough to furnish us with complete data has not always made beautiful pictures. At some time—perhaps only a few months ago—he, too, needed to read "Our Illustrations" for inspiration and guidance.

Let us suppose that a beginner has just purchased a moderate-priced camera. He is filled with enthusiasm. He looks through the photographic magazines and fails to realize the amount of hard work it requires to produce the pictures he admires. He snaps to right and left; but without avail. Those pictures in the photo-magazines seem to be as far away as ever with regard to the attainment of similar results. Let us suppose that our beginner yearns to produce a landscape, with long shadows sweeping across the open fields. After many unsuccessful attempts, he becomes discouraged. At length, a picture that expresses in some degree his ideal is reproduced in PHOTO-ERA. By referring to "Our Illustrations," he learns in detail just how, when and where this picture is made. He discovers that a ray-filter is of great value; that a longer exposure is necessary in order to obtain true value in the shadows and that a tripod is of prime importance. There are other suggestions contained in the data that he never thought of; and, in consequence, when our beginner makes his next attempt, he proceeds along practical and proved lines with subsequent success—a reality, instead of a hope.

Another service rendered by "Our Illustrations" is to guide the absolute novice in his selection of the best photo-equipment suited to his requirements, whatever they may be. If the beginner is interested to photograph children, let him obtain the back-files of PHOTO-ERA. By picking out every picture of children and reading the corresponding data, the tyro will soon become familiar with the sort of equipment best suited to child-photography. In addition, he will obtain invaluable information with regard to exposure, focusing and manipulation of the entire equipment. Also, he will note little individual touches that are given by various contributors to every picture that they submit

for publication. Taken in the aggregate, these technical and artistic facts are of eminently practical value to any novice desirous to equip himself to the best advantage.

Again, let us suppose that there is some doubt in the beginner's mind as to whether roll-films or plates are best adapted to his work. A careful reading of "Our Illustrations" will aid him greatly to form his own conclusions. It is not a question as to whether roll-films, plates or film-packs are best; but rather which one of the three will do the beginner's work most effectively. In this connection, it should be remembered that nearly all cameras that require plates or film-pack may be focused by ground-glass; whereas most cameras using roll-film must be focused by scale. Photographic authorities agree that the ground-glass focusing-screen—and the mirror in reflecting-cameras—is the most accurate method to focus yet devised. Beginners who mean to do really serious work, should remember this point and, if possible, obtain an equipment that embodies an accurately adjusted ground-glass focusing-screen.

Still another service rendered by "Our Illustrations" is with regard to developing and printing. There are many developers on the market to-day. The data will show more clearly than all argument which one is used most by discriminating camerists. In short, if "So-and-So's" developer is mentioned often by contributors from widely separated parts of the world, it is but natural to assume that they have found this developer satisfactory. On the other hand, if it is mentioned only occasionally—perhaps not at all—it follows by inference that camera-workers have little confidence in it or have not even heard of it. To make this test fair, the beginner should glance through several issues of PHOTO-ERA. Whenever a new developer appears on the market, it will soon make its appearance in "Our Illustrations," if it is satisfactory.

Various printing- and enlarging-papers are mentioned in every issue and these also give the beginner an opportunity to decide with regard to the paper used successfully. It is very important to learn the great advantage of being able to select a grade and surface of paper that will bring out the very best that is in the negative. Also, it is very important to know the surface of paper that will enable the halftone-engraver to reproduce successfully the detail and halftones of the original picture. Many excellent photographs submitted to PHOTO-ERA cannot be used, solely because the senders employ Japanese-tissue; blue-print, linen-finish and rough-surface paper—all of which make the engraver's task nearly hopeless. Whenever such pictures are sent, be sure to include another print on paper suited to halftone-reproduction. It is not always essential that prints be made on glossy paper. A good snappy print on matte surface, showing detail and tonal gradations, will enable the halftone-engraver to reproduce a picture satisfactorily. The engraver and printer try to do their best, despite the many difficulties brought on by the war. Incidentally, we feel sure that our readers appreciate our difficulties at the present time.

Without further enumeration let the beginner take my word for it that the department, "Our Illustrations," in every issue of PHOTO-ERA *is for him—every word of it!* The artistic and practical technical information is of the sort that will help and spur on every ambitious beginner. Seemingly, insurmountable obstacles always make the red-blooded man roll up his sleeves. Let every beginner roll up his photographic sleeves, and see to it that in the future he gets his money's worth out of "Our Illustrations."

A. H. B.

Where to Keep Printing-Papers

THOUGH the darkroom would appear to be the most natural place in which to keep a stock of printing-paper it is by no means the best. Damp and chemical fumes are the prinicpal enemies of plates and papers, though the latter are apt to suffer most, probably because less protected by packing. As regards the first cause of injury—damp—this is generally noticed in a darkroom fitted up in a cellar, a practice often adopted by amateur photographers. Papers will take no harm if kept in a dry cupboard in a well-ventilated room. Chemical fumes are a more serious menace, particularly sulphuretted hydrogen, ammonia, and acids. The first is a nauseous-smelling gas given off from sodium and potassium-sulphide solutions. Ammonia and hydrochloric acid are used in the form of a strong solution of a gas in water, and every time the stopper is removed some of the gas escapes into the air.

The Amateur Photographer.

An Orange-Glass for a Safelight

THE following is a very simple method to make an orange-glass for a cheap lantern that has been supplied only with a red one, as advised by a writer in the *Amateur Photographer*. Most packets of bromide and gaslight papers are wrapped round with orange-paper. Take a clean piece and cut it to the size of the glass, then iron it to remove all creases. Be careful to gum only the edges to the glass, and be sure to pull it as tight as possible, and there you have a good orange-glass. When using, it is safest to put the paper-side out, so as to prevent any risk of it burning.

The Amateur's Darkroom

ALTHOUGH the various developments of modern photography have made a darkroom almost unnecessary, in fact some film-workers dispense with it entirely, it is probably the ambition of most amateurs to possess such a convenience, not only to develop their negatives and to load the camera, but to enlarge lantern-slide making, and other branches of work. Even the operations which can be carried out in the ordinary living-room are done more conveniently in some place where the apparatus and materials can be left undisturbed, and do not have to be stowed away every time after use.

The faults to be found with a great many amateurs' darkrooms, and with those of professionals too for that matter, are that they are badly illuminated and badly ventilated, if they are ventilated at all. The results are that the work cannot be done carefully, because the photographer is afraid of fogging his negatives, and is in a hurry to get out into fresh air. It is much more important, from the point of view of the work to be done, to have good ventilation and a safe and strong light, than it is to have a water supply and drain. Substitutes for the latter, in the shape of a jug and pail, mean only a very little extra trouble, and nothing can take the place of the former.

Ventilation is provided automatically, if there are two openings into the outer air, one at the highest point of the room and one at the floor-level. They should be as large as can conveniently be arranged, and, of course, should be light-trapped. The opening at the floor needs hardly anything in the way of a light-trap, as it can be placed underneath the work-bench, which then itself forms a protection for anything on it. The upper opening calls for more thought.

A simple arrangement is to have a hole in the wall, and then on each side of it to have a shield—wood or

SECOND PRIZE
BEGINNERS' COMPETITION



THE BROOK GEORGE P. EATON

eard will do—an inch or two away from the wall, and extending an inch or two beyond the opening all round. If the edges of the opening itself and the inner surfaces of the shields are given a coat of dead-black varnish, this will be quite sufficient even for an opening into strong daylight. The black is an essential. If nothing can be put on the outside of the opening, on the ground of unsightliness, then a box with a baffle-plate of some kind must be attached on the inside. While it is important to exclude white light, it is important also, not to use any more baffles than are absolutely necessary, and to give as much clearance for the air as possible: as the efficiency of the ventilator is impaired if the air has to turn many corners on its way out.

Unless electric light is the illuminant, another point in connection with the ventilation should have attention. If possible, the products of combustion should be led straight out of the room, and not be allowed to mix with the air which the photographer inhales. It is usually easy to arrange a little inverted funnel—a mere tube will do—so that its lower end is just above the top of the lamp, and its upper end opens outside the room, or else close to the ventilator. A lamp contaminates the atmosphere far more than a second person in the room would do. For this reason, if the lamp can be put outside the room altogether, so much the better.

Adequate illumination depends upon a strong illuminant, a large window or light-filter, and a suitable screen in it. As a rule, more attention is given to the character of the "safe-light" than to its size and the strength of the light which falls on it. The result is that if the light is safe, it is very feeble. In the early days of gelatine dryplates, ruby glass was used to the exclusion of almost any other medium, but its general unsuitability for the purpose is now recognized, and it is only to be found in lanterns of the cheaper and less satisfactory kind. It is not that ruby glass, when good, is not "safe," in the commonly accepted use of the word; but that to obtain safety, the light is quite needlessly feeble.

Safe-lights are now obtainable very cheaply, at least as far as small sizes are concerned. For openings of two or more square feet, the prices charged seem high, and it is more economical to use two or three thicknesses of stained paper, enclosed between glass. White blotting-paper makes an excellent material for the purpose. It can be dyed with naphthol yellow and with methyl-violet, and then when dry waxed by means of a piece of paraffin-candle, ironing the blotting paper between newspapers, to distribute the wax and to absorb the surplus. One sheet of the violet-stained paper, sandwiched between a couple of the yellow, makes an excellent screen for rapid and for orthochromatic work. Before the war the dyes were readily procurable: but there may be some difficulty at the moment to get them.

Judging the density of negatives and the depth of prints is made much easier, if the darkroom light is always used at the same intensity.

H. A. R., in *Photography*.

ANSWERS TO QUERIES

Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.*

A. E. S.—**Your Film-negative of a wooden structure surrounded by snow is, indeed, a positive as you suggest.** The picture, being exposed three minutes,—according to your own statement,—shows the effects of excessive exposure, which during the process of development terminates in a reversal of the image, *i.e.*, the shadows, instead of being transparent film, are black and dark as in nature, and the light parts, instead of being black, are white. This reversal is due to the extreme action of light, also known as solarization. The picture should have had an exposure of a fraction of a second, or, at the most, several seconds, in the circumstances. We hope that in exposing other pictures you will be more reasonable as regards the time of exposure that should be allowed. If you are equally liberal with the time to be given to your summer-pictures, you will have similar results, or positives instead of negatives. We know of no process by which you can transform this positive into a negative except by making a film or glass contact-transparency in the proper way.

E. M. T.—**"To recoat spoiled negatives," as you term it, is hardly practical.** Even, provided you had the ability to clean thoroughly the spoiled negatives and to coat them with a fresh sensitized emulsion, you would find the process to be very expensive and surely not worth the necessary time, effort, and expense. The best way is to throw away useless negatives, if they are not very numerous, and to buy a box of fresh plates.

W. F. G. **The reason that the Goerz Dogmar F/6.3 lens is no longer made** is that the special optical glass required for it is no longer obtainable in the U. S., and it has not been obtainable for nearly three years. From tests made on various cameras and on scientific test-benches, the F/6.3 Dogmar lens will meet every photographic requirement within its scope. The Hekla lens may give a more brilliant image, due to the fact that the actual—not the marked—maximum aperture is greater than that of the Dogmar. The Hekla is an excellent lens and does good work, but at the same time it is not in the same class with the Goerz Dogmar, providing you have a perfect Dogmar lens. As far as your case is concerned, we can only suggest that if by actual test you obtain better results, consistently, with the Hekla lens, it might be well then to dispose of the Dogmar. The name on a lens often has nothing to do with the results. By that we mean that if you can get the results you wish with the Hekla lens, we see no reason why you should try to use the Dogmar, if you failed consistently to obtain the results you wish. Our suggestion would be to test out the Dogmar once more, carefully trying it on the very work you wish to do, making sure that it is correctly mounted in the shutter, and that the glasses are clean, and otherwise in perfect condition. If then your results do not equal those obtained with the Hekla lens, we believe it would be to your advantage to dispose of the Dogmar and retain the Hekla.



POSING FOR THE CAMERA — MATTI ANTILA

THIRD PRIZE—BEGINNERS' COMPETITION

L. A. G.—**The irregular crescent-shaped stop of light on your film** was probably caused by a leakage of light through the shutter. If the sun be allowed to shine directly on the lens for any length of time, some of the rays are likely to find their way inside and cause trouble. It is possible also that in closing your camera the bulb may have pressed against the shutter release and caused the trouble.

F. A. B.—**The best treatment for a broken negative,** when the glass only is cracked and the film unbroken, is to bind at once onto a clean piece of glass with lantern-slide binding to prevent further damage, and then in printing cover the face of frame with one or two thicknesses of tissue paper and suspend it in the sun on a double cord which may be twisted tightly and the frame allowed to revolve. If kept in constant motion, the crack will show very little, if at all. If the plate is a valuable one, a glass positive can be made, the mark retouched and another negative made from that.

K. P. A.—**In trying to get a larger image you have strained the "universal-focus" of your lens.** Few of the Kodak lenses will give a clear image at less that six or eight feet, and even if they would cut clearly at closer range, the distortion would be very evident. The Eastman Company has a supplementary lens, or Portrait-Attachment, which makes it possible to get the larger image at a proper distance.

PRINT-CRITICISM

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.*

G. G.—Your view "Querna Verde Park, Colorado," has great pictorial value. The camera was pointed too much towards the right and includes a pretty view, brightly lighted, which forms a picture of its own, thus dividing the entire composition, one of decidedly dual interest. The tone of the print is pleasing, though a trifle too light.

J. G.—Your picture, "On Guard," representing three white cranes grouped about two nests containing eggs, is interesting purely from a zoölogical viewpoint. The birds are faeing in one direction—towards the left—and, though the setting, composed of surrounding bushes, lends interest to the seene, the artistic element has not been particularly well expressed. The fact that the bird nearest the camera is considerably out of focus, and the one a few feet away nearest the eamera and guarding the nest, is sharply defined, does not indicate eareful workmanship.

G. G.—Your subject, "The Stream in Summer," is a brilliant bit of landscape-photography, with a large luminous cumulus cloud reflected in the water below. The horizon-line divides the picture, horizontally, in two equal parts; the upper containing the cloud, and the lower, its reflection. Thus, we have a picture of double interest which, though pleasing to the eye, does not result successfully in a well-balanced and harmonious composition. The tones are good.

F. C. J.—"Betty," a young lady seated near a window, does not represent a favorable sitting on account of the brilliant white shade that covers the window and the drapery descending in a broad white mass close to the sitter, whose costume is lighted so strongly as to lose detail and gradation. It would be better to have posed the sitter away from the window, altogether. The facial expression is sad and the direction of the eyes, being several feet above the head of the camerist, is unfortunate. In the circumstances, the summer-hat worn by the sitter seems out of place.

J. F. C.—"A Quiet Evening," picturing a lady looking at a book, the illumination coming from an electric lamp with a shade, is fairly good. The result has been impaired by evidence of motion, the hands and book being blurred. The book-rack on the table, with its contents facing the lamp, edgewise, is a disturbing element, and should be subdued in the negative. On the whole, this picture, probably one of the most difficult subjects you have undertaken, is very creditable.

C. J.—"The Cottage in Mid-Winter" is too symmetrical to be pictorially successful; the picture is divided into three equal parts, viz., sky, house and foreground. This symmetry is increased by a tree on each side of the house. The foreground is interesting; still, it would be well to sacrifice an inch of it in order to improve the proportions of the picture, in which case nothing need be trimmed away from the top, and the foreground retain the pretty falling shadows of nearby trees. Technically, the picture is excellent and, with the modifications suggested, will be greatly improved.

L. M.—"Indian Summer," seemingly at the edge of a wood with a brook running diagonally through the foreground, suggests great pictorial possibilities. Its present arrangement is not very artistic; but the result might have been improved by different lighting, taking advantage of the light falling in a direction different from what it does at present.

L. M. C. J.—"On the River Drive" depicts an attractive and well-kept country-road. The picture is marred by a white mass of the river at the left, and a perfectly blank sky. We would suggest that the view of the river be trimmed away; also, a large part of the blank sky, about two inches of the foreground and one-fourth inch off the right. By masking the picture with pieces of dark paper, you will notice that a very attractive composition may thus be produced. Masking the negative correspondingly, slightly regarding the dark mass of trees at the right, you will create an exceedingly attractive and well-composed picture from a negative, which, in entirety, is devoid of pictorial interest.

H. E. W.—Your interpretation of "A Rainy Autumn Day" is somewhat conventional. It represents a street in what appears to be a small town, with a tree placed in the foreground—virtually in the middle of the picture-space. Reflections of this tree, and others in the background, indicate that the ground is covered with water—presumably the result of a rainfall. Other than this, there is no indication of rain. The picture would have been improved had there been actual evidence of rain, such as a person walking under an umbrella, his feet clad in rubber overshoes, or showing other signs of walking or slipping in the rain. Considered pictorially, the picture is not bad, although the tall telegraph-pole, placed very near the principal tree in the middle of the picture, and parallel to it, would appear to be the chief blemish. This pole could very easily be eliminated from the negative and the resulting print, and thus the picture could be improved. This is also true of the hitching-post to the left of the afore-mentioned tree. The picture suffers from many vertical objects—trees and posts. Tonally, the print is good.

O. P. D.—The pose and lighting of your home-portrait are excellent, but the prominent figure in the wall-paper and the parts of pictures included are very distracting. The head is also too low in the oval. A smaller oval would eliminate the pictures and improve spacing.

G. P. L.—An excellent handling of a difficult subject. It is unusual to see so luminous a light with transparent shadow in a portrait taken in full sunlight. The hat-brim has acted as a diffuser, and the light reflected from the white dress did the rest. However, a shorter exposure would have spoiled it. You have succeeded admirably in this.

P. R. C.—A splendid child-study marred seriously by the conspicuous white towel hanging directly over the child's head. Had it been laid on the shelf at the right of the wash-basin, it would have been in shadow, and so less white, and it would have aided in a triangular composition instead of prolonging a straight dividing line bisecting the picture.

D. C. P.—An admirable snow-picture. The glitter of the snow is remarkably well shown by the back lighting, and the converging shadows of the trees concentrate the interest admirably.

W. C. D.—The dead blackness of the background might be relieved by a little work on the negative. The figure itself and the expression are admirable. The lighting also is excellent. If the whole of the feet had been included it would have been better, as showing them only in part suggests amputation.

OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

MANY of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general, that, in order to stimulate and help develop this valuable faculty, we have introduced this competition. It consists of the reproduction of a photograph lacking good composition. To him who sends us the best criticism, before the twentieth of the current month, we will send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson; price, $1.50. In the event of several criticisms (not exceeding three) being satisfactory, they, too, will be awarded copies of the book.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his book.

Successful Criticisms

IF the tree on the right had boughs and leaves, things might be different, but, at present, it is only a post covered with bark. Moreover, I suspect the man of trying to peel said bark off. He appears to have cleared one patch off already and is still stabbing at it with his fishing-rod. The highlights at the left are distracting and should be subdued. To trim anywhere would give the trees too much importance which would be undesirable, so we won't trim. The worst point, in my estimation, is the way the right tree conceals some of the fish-story. The picture is well timed. Fore-, middle- and back-ground are all natural and beautiful. The color is good. The story is well told. But oh! How I hate that one tree!

HERBERT BERNSTEIN.

Two things seem to mar an otherwise pretty picture. The viewpoint chosen so that the two trees are in the middle of the picture is bad. Any tree or trees in the foreground should be at the edge or somewhat near the edge of the picture. Also the highlight at the left on the water and the fisherman's position draw the eye to the left, while the eye ordinarily travels toward the right. Such details should lead into the picture in the distance. The tones are very good and the shadows pretty, but such material justifies another exposure.

FERLAND D. GILPIN.

WHILE the technical work seems to be satisfactory—the composition of this picture lacks unity and simplicity. I hardly think that Mr. Jordan selected the best viewpoint. The foreground is particularly well managed and the water is well rendered and is nicely broken up by the reflections. The pose of the figure is good and suggestive of movement. The trunks of the trees, especially the one on the right, so symmetrically disposed, and being in the exact center, detract considerably from what should be the main object,



THE PICTURE CRITICIZED THIS MONTH

judging from the title, the fisherman. There are really two pictures in the composition as presented—and I would suggest cutting the print in halves. The left side then makes a pleasing little water-scene, while on the right we can concentrate on the fisherman and obtain another interesting picture which more adequately expresses the title selected.

ARTHUR H. FARROW.

THIS print sins grievously against the canon of unity and furnishes an excellent example of what is meant by "divided interest." The two trees and the man are the most prominent part of the picture and they compete for attention—disastrously. In a landscape, the human figure should be obviously the main interest or else serve merely as a convenient and suggestive accessory to the scenery. Here each clamors for attention and one cannot determine which is accessory to the other. The lights, also, are badly distributed; too much highlight in the lower-left corner. The fish-pole, if there is one, is barely visible, and one is uncertain whether the man is fishing or throwing food to the fishes.

E. L. C. MORSE.

THIS is a beautiful composition, giving a pleasant sense of out-of-doors, telling an interesting story, and awakening happy memories. It is, however, marred by the intruding tree-trunk on the right, which cuts the fisherman's rod in two and abruptly checks the attention of the beholder who tries to follow the lead of the rod and the attitude of the man. To emphasize rather than hide the point of interest, where the big fish may even now be darting at the fly, the rod and line should be more strongly marked. The light spots in the water at the left of the picture would serve very effectually to lead toward the center of interest if the left-hand tree-trunk were not quite such a bar.

H. H. BLISS.

THIS picture has too many white masses of similar tone. The eye naturally enters the picture at the left, travels up the bank, jumps to white mass at right, then back again and up through the smaller white masses in the tree to the sky, and back again to the starting-point, having found nothing.

The tip of the rod is the interesting point and the converging lines lead to it, but, alas! the tree hides it. The trees, too, form heavy perpendicular bars which throw the eye to the sides of the picture.

By cutting the picture in half and placing the figure on the left of the nearest tree, with more space on the left and the tip of the rod against the white mass, would improve it. Some of the other white masses could be darkened with charcoal and the print copied to destroy the "spotty" effect.

J. BRUCE MCCRACKEN.

OUR ILLUSTRATIONS

WILFRED A. FRENCH

When the French sculptor Bartholdi conceived and modeled his statue, "Liberty Lighting the World," and which, as a colossal work in bronze, the French people presented to the United States—over thirty years ago—he was actuated by the impression made upon him, during a voyage to this country, by the eagerness with which the immigrants crowded the decks for a first glimpse of the new land to which they were coming with so much hope and confidence. But since its erection, the great figure has also served as a warning to the world, at large, that Democracy was ever on the alert and prepared to defend its ideals and its loyal sons against an attack from a possible foe lying in wait on the other side of the Atlantic.

Again—holding aloft the flaming torch, and lighting the way to our hospitable shores, and radiant in the light of electric suns, the figure of Liberty seems to encourage the French people in this their sad hour of trial and, inspired by the example of Rochambeau and La Fayette, to tell them that the hearts of the American people beat in sympathy for their brothers at the battle-front.

The picture—front-cover and page 73—is one of suitable proportions, adequately artistic with light emanating from above and below, and quite creditable to the technical skill of Leander Miller. Data: location of the statue, Bedloe's Island, New York Harbor, $1\frac{3}{4}$ miles from the Battery; height from base to torch, 151 feet; foundation of pedestal to torch, 305 feet; 8 x 10 Seneca view-camera; 12-inch Ic Tessar; stop, F/16; October, midnight; dark night; 30 minutes' exposure; 8 x 10 Standard Orthonon; pyro; direct print on Azo Hard Prints, for sale at 60 cents each; address Leander Miller, 310 22d St., Brooklyn, N.Y.

"Alongshore with a Camera" is Mr. Langland's second contribution on the subject of marine-photography to this magazine, the first one, also superbly and copiously illustrated, appearing in the issue of July, 1913. No aquatic photographer has shown a greater sympathy and, at the same time, a higher degree of artistic skill, than Mr. Langland. The pictures and text are inseparable. In the use of his camera, he has shown the ability of a true pictorialist and the fine sensibilities of a real artist. In his thematic selection and pictorial designs, Mr. Langland seems to have followed his individual inclinations, but he has not erred on the side of extravagance, true beauty being his ultimate aim. Data: "A Lake Michigan Schooner"—frontispiece; June, 9 A.M.; atmosphere smoky, but light good; 5 x 7 Premo; 9-inch R. R.; stop, F/8; 1/50 second; Standard Orthonon; Dianol in tray; Velox enlargement. "A Misty Morning"—page 60; 5 x 7 Premo; rear lens (16-inch) of 9-inch R R; Sept. 9 A.M.; light, misty but good; 1/5 second; Standard Orthonon; Dianol; bromide contact-print from enlarged paper-negative. "Opalescent Clouds and Lake"—page 61; $3\frac{1}{4}$ x $5\frac{1}{2}$ Premo; $6\frac{1}{2}$-inch Zeiss Kodak; stop, F/6.3; 3-time color-screen; June, 6 P.M.; clouds with light shining through; 1/50 second; film-pack; pyro in tank; Standard Bromide B. enlargement; "Drifting in the Bay"—page 63; $3\frac{1}{4}$ x $4\frac{1}{4}$ Kodak, No. 3; $5\frac{1}{2}$-inch Kodak R. R.; stop, F/8; July, 9 A.M.; bright sun; 1/100 second; Eastman N. C. Film; pyro in tank; bromide enlargement. "The Glow at Night"—page 64; $3\frac{1}{4}$ x $5\frac{1}{2}$ Premo; $6\frac{1}{2}$-inch Zeiss Kodak; stop, F/6.3; December, 8 P.M.; electric light; 5 minutes; Standard Orthonon; Dianol in tray; Standard Bromide B. enlargement. "The Last Mooring"—page 65; 5 x 7 Premo; 9-inch R. R.; stop, F/8; May, 5 P.M.; bright sun; 1/100 second; Standard Orthonon; Dianol; gum-bichromate print. "Fisherman's Home"—page 67; No. 3 ($3\frac{1}{4}$ x $4\frac{1}{4}$) Kodak; $5\frac{1}{2}$-inch R. R.; stop, F/8; July, 5 P.M.; bright sun; 1/50 second; Eastman N. C. Film; pyro in tank; Royal Bromide enlargement (7 x 10). "Icebergs"—page 68; 5 x 7 Premo; 9-inch R. R.; stop, F/16; 3-time color-screen; February, 10 A.M.; bright sun; 1/25 second; Standard Orthonon; Dianol; Velox enlargement. "The Harbor at Dusk"—page 69; camera and lens as preceding; stop, F/8; October, 7 P.M.; light, dim and smoky; 1/10 second; Standard Orthonon; Dianol; 5 x 7 contact Cyko print.

In view of the technical difficulties connected with the making of mirror-portraits, one is disposed to accord generous praise to the really successful and attractive effort of William Shewell Ellis on page 71. A true connoisseur of female beauty, this master-photographer never fails to perpetuate it when once it comes under the spell of his camera. A really pretty woman need never doubt the outcome of a sitting in Mr. Ellis' studio. No data.

It has not been my privilege to see more successful outdoor-photographs of babies than those that accompany the article by Nathaniel E. Brooks, pages 74 to 76. They are eminently successful in that the figures are large, well lighted, very clear without being excessively sharp, in attractive, natural positions, and substantial yet not intensely realistic. Mr. Brooks' pictures are also wonderfully stereoscopic, a quality that has its origin in the manner of lighting—strong and oblique, rather than weak or diffused. The chemical effect, to use the professional's diction, is clean and brilliant, which heightens the impression of realism, and is in pleasing contrast to the undecided, "muddy" quality that characterizes so many portraits or genres made in the open. If the reader—a professional specialist in this class of portraits, in particular—has any doubt as to the sort of picture that is likely to capture the heart and purse-strings of a fond mother, let him make the experiment with a set of pictures made after the manner of Mr. Brooks. Data: "See my Toofies"—page 74, April 1, about 3 P.M.; bright light; $3\frac{1}{4}$ x $4\frac{1}{4}$ R. B. Tel. Graflex; $6\frac{1}{2}$-inch B. & L. Tessar, series Ic, F/4.5; stop, F/8; no color-screen; 1/65 second; Graflex Film; Pyro-Monomet-Hydrochinone, in tank; enlarged on Artura Carbon Black Buff, developed in Artura formula with double quantity of water, and sodium carbonate cut in half. "Here Comes Mother"—page 75, April; all other details same as above. "Interested"—page 76, April; details same as above.

Of C. W. Christiansen's status as a pictorialist, exhibitor and prize-winner, there is no doubt, although examples of his work have not been seen in these pages for a decade. He has been persuaded, however, to accord readers of this magazine the benefit of his artistic experience and to give, in a somewhat abbreviated form, his ideas on the subject of pictorial photography and his method of producing the results that have won

for him distinction in salons and other prominent exhibitions. The head of a sculptured lion, page 78, is an interesting artistic study and fits the first section of his practical and entertaining essay, written in three parts, of which the last two will be illustrated with several of his finest pictures. Data: June, 6 P.M.; 4 x 5 Graflex; 11½-inch Spencer lens; at full aperture; bright light; 3-time color-screen; 1/25 second; Orthonon plate; carbon enlargement.

As explained in the June issue, in connection with his souvenir-picture of Louisa Alcott's House, George S. Seymour has been inspired to write a number of short poems with landmarks of New England as themes. In the current issue, page 86, is reproduced a typical view of Marblehead, with appropriate verses. One is a worthy companion of the other. 3A Kodak (postcard-size); Kodak-anastigmat; stop, F/16; August, 2 P.M.; good light; 1/25 second; Eastman roll-film.

Advanced Workers' Competition

RAY TROWBRIDGE'S prize-picture, "Twilight," page 89, expresses the theme in a delightfully convincing manner. The sombre tone is true and well sustained, and broken by the lingering remains of what must have been a radiant sunset. The pictorial proportions are admirable, possible monotony of the water-surface has been averted by bushes rising in the foreground, and the placement of craft with its tender is praiseworthy. Data: August, 6.30 P.M.; cloudy, dull; Goerz Ango, 4¾-inch Dagor, at F/6.8; 1/30 second; Standard Panchromatic; Rodinal; Artura E Carbon Black Rough Buff.

The portrayal of the finale of a fishing-trip, by D. W. Ross, page 91, reveals a theme of great originality. The interest centers in the cat which while committing the act of petty larceny assumes a typically graceful pose. Fortunately, the surroundings appear to be shrouded in gloom, thus affording the needed contrast. However, a possible criticism might be offered with regard to the uppermost basket, which, had it been placed in the foreground, at either side of the chair, might have improved the general composition. One is pleased to note the absence of any object that might disturb the harmonious appearance of this unusual picture. Data: 4 x 5 Poco Camera; strong light, 2 P.M.; lens stopped down to F/16; 1/100 second.

American scenery, west of the Great Divide, is noted for strange and varied forms in nature's architecture. One of these—"Sculptured Cliffs," page 92— is from the well-filled portfolio of Forman G. Hannah, who has exhibited with marked success prints of this character at American and European salons. The method of soft definition, in the degree used by Mr. Hannah, seems to suit this class of subjects, as it helps to retain the warmth of color and atmospheric quality that belong to these rocky structures of the American desert. Data: June; bright light; 3¼ x 4¼; R. B. Graflex; 7⅜-inch Zeiss Protar; stop, F/11; B. & L. color-screen; Premo film-packs; pyro in tray; 10 x 12 Royal Bromide.

The Beginners' Competition

WHEN regarding the work of the contributors to this department, one should bear in mind that it represents the unaided result of their efforts, and that it should not be criticized too severely. Often, the attempts of these camerists of limited technical knowledge indicate an artistic perception and a creative faculty not always found in the ambitious efforts of more experienced workers. Then, again, participants in these secondary competitions will display an adequate technique without true artistic feeling.

This last remark does not apply, however, to the bucolic scene by A. J. Voorhees, page 95, which has poetic interest, artistic feeling and technical merit in a high degree. The highest light is on the barn door, where it is not needed. Perhaps, if the exposure had been made early in the day, this would not have happened. There are also too many vertical lines in the picture—the door, posts, and the farming-implements leaning straight up against the side of the barn—which cannot be regarded as an artistic asset. The pitchfork and shovel could have been left lying carelessly about—i. e., merely while the exposure was being made, and afterwards replaced in an orderly manner—and other vertical lines camouflaged temporarily. The door, with the light coming from the opposite direction, would have been less conspicuous, or, if possible and convenient, it could have been removed temporarily. These are merely suggestions to show what resourceful camerists may do, and actually do, in order to create a satisfactory pictorial composition. Data: March 10, 1918; 3.30 P.M.; bright; 3¼ x 4¼ R. B. Graflex; 9-inch Struss Pictorial lens; at F/11; 1/25 second; Standard Orthonon; Terchol and hydrochinone; enlarged with 7-inch Zeiss Tessar at F/4.5 (from part of negative) on Enlarging Cyko Buff; same developer as for plate.

"The Brook," page 97, is certainly an inviting camera-theme. The artistic intent, by Mr. Eaton, merits praise; but is not the interest divided by the waters of the brook and the trees charged with radiant light? It seems that if foliage were dense less light would be visible behind it, thus giving more prominence to the brook. Besides, as the picture produces a *contre-jour* effect, the tree-trunks and other objects are in the deepest shadow, which, with the lighted parts, gives the picture an unpleasant, spotty appearance. None of these defects need exist, had the light entered the picture from either side with its source a little towards the camera. The large circular, white spot in the immediate foreground has its origin in a corresponding dark one in the negative and is easily removed. Data: August 7, 1917; 2.30 P.M.; bright light; T. & P. 3¼ x 4¼ camera; R. R. lens; stop, F/16; 1/50 second; Hammer Red Label; adurol in tray; contact Azo print.

Though evidently made in the spirit of fun, the group by Matti Antila, page 98, is remarkably well done—i.e. the three heads in a row. The flesh-values, the definition and perspective are admirable. A pity that the picture is marred by excessively black tone of the trousers and stockings, the tree and other objects, which could have been avoided by giving a little more exposure or by using a diluted developer. With care, a picture of harmonious and correct tonal values would have been produced and one in which the faces of the children would appear just as advantageously as here. Of course, the setting of the present picture is bad. It might easily have been better, for there appears to be adequate room and attractive surroundings to have posed the children in a more favorable spot and with a view to obtain a pleasingly artistic arrangement. Data: Sept. 12.45 P.M.; cloudy bright; No. 9, 3¼ x 5½ premo; Kodak anastigmat F/7.7; stop F/16; 1/25; premo film-pack; Eastman M. Q. powders; direct contact print on regular Velox.

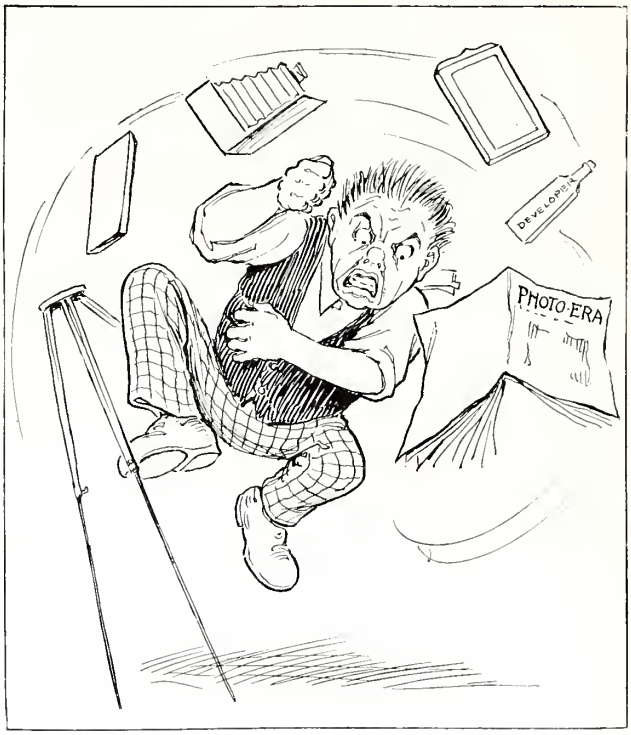
Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is "Market-Day in Jamaica,"

(*Continued on page 107*)

ON THE GROUND-GLASS

WILFRED A. FRENCH



"WITH PLEASURE!" CHAS. A. HUGHES

"With Pleasure!"

ASKED if he would contribute a print to "Our Contributing Critics" department—an honor not greatly to be coveted—our good friend, Chas. A. Hughes, responded promptly and generously. The picture, an indoor genre entitled "The Reading-Hour," will appear in the September issue. Being also a gifted draughtsman, Mr. Hughes illustrated his ready acquiescence by means of a pen-and-ink sketch, which appears on this page.

A Candid Opinion

AT a certain competitive exhibition of pictorial photographs held in a large Eastern city, recently, and known for the prominence it gave to ultra-impressionism, occurred an incident that may prove of interest to devotees of sane photography.

Of the many examples of vacuous and meaningless endeavor, as well as utter waste of perfectly good material, was one, which, because it had been selected by the jury for special distinction, attracted a considerable crowd. As they gazed in a helpless sort of way at the spineless mystery, a distinguished looking individual approached, gave the picture a momentary inspection, and proceeded to the next picture on the line. He almost bumped into a man who, appearing to know him, said: "Pardon me; but you don't seem to have noticed my picture," indicating the prize atrocity. "Suppose you look at it and give me your candid opinion." The gentleman, with martyrdom staring him in the face, retraced his steps, adjusted his spectacles, gazed nonchalantly at the alleged work of art and replied: "We are standing altogether too near to enjoy it fully. It's a picture that should be seen at a distance to be really appreciated." "You've got the right idea, sir," quickly responded the perpetrator of the crime. "How far back, in your opinion, should one stand to get the best effect?" Calmly looking the enemy of definition in the eye, the critic answered: "I should say about a mile or two," and abruptly walked away.

A Punishment to Fit the Crime

ALTHOUGH the query forwarded by a Down-East camerist, as to the origin of "oleomargerine," as he calls it, is not photographic, we venture to state that, according to a well-known lacteal authority, the inventor named the product in honor of his daughter Margery.

Is Art a Luxury?

In commenting on the hard lot of the painter, or the creator of works of art, in time of war, and whether it is right that he shall be overtaxed, Charles Vezin, of New York, writes to the *New York Sun*, as follows:

If I am correctly informed, the Ways and Means Committee is planning to put a tax of 25 per cent on the sale of works of art on the assumption that art is a non-essential.

There is no vocation upon which the war has fallen with such pitiless cruelty as the painter's and with more injustice. This war, like most wars, can be ultimately traced to material motives. Art is not material in its aims, though in another sense so material to human progress and happiness. The artist and his ideals are therefore the greatest factors for peace in man's struggle toward the goal in which we must even now have faith. While labor is prospering as never before, while most merchants are making fortunes and captains of industry are multiplying their wealth, the artist sees the cost of what he needs to support life doubled, sees his tools and materials placed on the list of non-essentials, and at the same time, with a few exceptions, has his income stopped, with its resumption more remote than that of any other calling. And now it is proposed to give him his *coup de grâce* by a tax which would practically stop purchases of works of art.

Those who call art a luxury know not what art is. As well call cleanliness a luxury. It is going back to the benighted times when daylight was taxed at so much per window, leading to the building of houses with but a single opening for light and air. It would be a tax upon our spiritual windows, and any nation that enacts such hideous laws must be cast into æsthetic darkness and vitiated moral atmosphere.

We have time and again been accused of being a materialistic nation. We are now waging a colossal war for an ideal, ready to sacrifice our all, looking for no material reward. In fighting for an ideal, let us not kill idealism. Let us keep alive the things without which the world peace we aim at would be hollow.

The proposed tax is no doubt intended as a levy upon the luxuries of the rich purchaser of works of art. That is not how it would work. It would simply eliminate the purchaser and mean the almost complete cessation of transactions in works of art and consequently the stoppage of art activities. I will reserve for another letter the discussion whether these activities should stop. I only wish to say here that the artist is doing more than his bit, fighting in the trenches, performing the arduous and dangerous duties of camouflage and giving without compensation numberless posters, range-finders and the like.

If art is a luxury, then love, religion, education are luxuries.

"Change of motion is rest." No army can win without rest. No nation can win without rest. The artist can furnish that needed brief rest of spirit.

Life without the appreciation of life is mere existence. Art is this appreciation made articulate, and this appreciation multiplies a thousandfold the value of life. And the function of the artist is to endeavor to give to his fellow-creatures that multiplication of life's joys which may be had for nothing and which money cannot buy. And that is why in these heroic times it is doubly necessary to keep alive the divine spark, so that, when peace comes, we be not consumed by the material spirit which must come with the reconstruction in which generations will struggle to replace the wealth destroyed. There is grave danger to art in the coming years, and it is our sacred duty not to let this thing perish from the earth. "Man cannot live by bread alone."

Art the appreciation of life made articulate! Perhaps those who propose to tax art out of existence wish to discourage this appreciation of life in order to create contempt for death. Certainly, without art life holds little. Are we to strangle this articulation and put a gag-law on the language of the soul?

The French Government has just purchased for 400,000 francs at auction a picture by Degas—the more remarkable because the picture has no historical, national or religious interest, its value purely artistic, and an example of supreme craftsmanship. Eighty thousand dollars! What would this not do to feed the hungry, to warm the freezing in suffering France! And no republican government would in these days dare do such a thing unless it felt sure of the approval of its people. But the heroic, the artistic French realize that it is not only the body that must be fed.

And with this example before us, shall we put ourselves on record before the world proclaiming art a non-essential together with cosmetics, chewing-gum and champagne?

Charles Vezin.

P.S. Since the above was written, I have shown it to a number of artists, and they suggest that if transactions in works of art must be taxed it be confined to the work of the dead, and that those now working be exempt.

When Hypo Yields Silver

When an amateur-photographer is called upon to replace the experienced operator of a professional studio, it happens frequently that, although he meets the ordinary requirements, he is not familiar with some of the many expedients that characterize only a thorough technical practice. That is why an apprenticeship—a good, old-fashioned term—in a first-class establishment is an invaluable experience for any young person who desires to fit himself for a technical calling, photography, for instance. Seeing the erstwhile amateur pour a gallon of exhausted chrome-alum fixing-solution down the sink, one day, a visiting veteran remarked: "That's sheer waste, my boy; it isn't going to do the plumbing any good, either." "Well, it's too much trouble to strengthen it; so I prefer to replace it with a fresh solution. What's the matter with throwing away the old one?" replied the newly engaged darkroom-expert. "Save it and get the silver out of it," explained the old operator. "Pour the old, used-up fixing-bath, dregs and all, into a water-tight barrel—be sure it doesn't leak,—having previously provided it with a faucet about eight inches from the bottom. When the barrel is nearly full, pour into it a strong solution of photosulphate of iron—common salt will do—enough to throw down all the chemicals in solution or suspension. Let it settle for a few days, then draw off the clear liquid, leaving the dregs or precipitate undisturbed. Then resume pouring in old fixing-solution and, at the right time, precipitating the chemical element and drawing off the useless, clear water. When the mud at the bottom has reached a depth of about six inches, scoop it up into a bag of cotton-cloth and strain it, letting it drip into a bucket or some safe place outdoors. When still moist—dried if you prefer—send the mess to a refiner and in a short time he'll send you a lump of pure silver, its size depending on the amount and richness of the residue he received. So you see, it pays to economize, especially in these days."

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Lantern-Slides For Our Soldiers in France

June 8, 1918.

WILFRED A. FRENCH,
Editor, PHOTO-ERA,

My dear Mr. French:

The Y. M. C. A. is called upon to furnish immediately an enormous number of lantern-slides for the entertainment of our soldiers in France. The work of entertaining the men, over there, has fallen very largely upon the stereopticon because of certain difficulties encountered in operating the movie machine, and because the stereopticon is the only form of entertainment which can be put into use in many of the small outlying sections where thousands of our men are billeted.

I am told that many camera-clubs and their members have many slides which may be idle at the moment and which the clubs or their members would be quite willing to send over to France and put into use where they could serve a most timely and useful purpose.

Will you try to get this message before the clubs for us and let them know our needs? Ask them if they do not want to coöperate with us. We can use almost any slides, plain or colored, on any subject, with or without reading-matter. The slides should of course have titles or something to describe them, and they need be packed only so that they could reach this office safely. They should be addressed: J. A. Rawson, Jr., 347 Madison Avenue, New York City.

I am very sure that if you make this message known to the camera-clubs and their members, many of them would appreciate this opportunity to make this personal contribution to the contentment and welfare of the men. Every set of slides received would be announced to the men as the personal gift of the donor.

Very sincerely yours,

(signed) J. A. RAWSON, JR.

British Photo-Weeklies Merge Interests

MESSRS. ILIFFE AND SONS, LTD., proprietors of *Photography and Focus*, have acquired *The Amateur Photographer* and *Photographic News*. The war has made such a concentration imperative, and the amalgamation of these well-known photo-weeklies will help to conserve the limited paper-supply and to reduce operating-expenses. The LONDON LETTER, in this issue, explains the merger in detail and gives many interesting facts with regard to both publications.

Arthur Hammond's Pictures

THE work of Arthur Hammond is well known to PHOTO-ERA readers, his versatility having been shown by reproductions of happy boyhood-scenes and shore-and harbor-scenes. A large collection of photographs of this character was exhibited in Goodspeed's printing-shop, Park Street, Boston, during the month of June, and received the warm approval of local critics. Here were exemplified Mr. Hammond's finest artistic traits—admirable pictorial design founded on a sound knowledge of pictorial composition; full appreciation and sympathetic interpretation of scenic beauty, and a delightfully sane technique. His marine-subjects pleased particularly by reason of their refined atmospheric quality, true tonal values and admirable pictorial proportion. Among his most attractive subjects were, "Haarlem River," "Wingaersheek Beach," and "Plum Island."

Frederick C. Beach

FREDERICK C. BEACH, inventor of the photolithic copying-process and one of the editors of *American Photography*, died at his home Stratford, Conn., June 8. He was a graduate of Yale in 1868, was secretary of Munn & Co., publishers of the *Scientific American*, which was founded by his father, Alfred Ely Beach; was president of the Postal Progress League of America, and one of the founders of the New York Camera Club and the Lantern-Slide Interchange. Mr. Beach was known, personally, to the Publisher of PHOTO-ERA who admired the integrity and modesty that always characterized Mr. Beach's business and social activities.

Boston's Photo-Pictorial Wealth

IN view of the restrictions placed by the administration upon the activites of camera-users, it is interesting to know that these restrictions are suspended whenever the authorities deem it wise to do so. When the amateur-photographer can prove that his activities are entirely in the interest of photographic art, and that his camera-activity is in no way associated with an anti-loyal motive, he will generally receive a permit to photograph almost indiscriminately, excepting of course, any public places connected with the defense of the nation.

In Boston, camerists with no anti-loyal motives, may photograph everywhere among the beautiful parks, parkways, and other beautiful spots of greater Boston and suburbs, but are required to keep away from the waterfront.

No city on the Atlantic coast is so favorably situated, with regard to desirable camera-material, as Boston. This, moreover, has been made known by the numerous pictures of Boston's pictorial attractions that have embellished these pages.

Any camerist who desires to visit Boston, this summer or autumn, and is in need of any information regarding pictorial material and camera-restrictions, is free to obtain it from the Publisher of PHOTO-ERA.

Julian A. Buckley

IN the death of Julian A. Buckley, in Boston, U.S.A. June 24, last, the photographic profession has lost a skilled and exemplary member. He began his professional activity as a draughtsman in the offices of well-known architects of New York, Baltimore and Boston, and in the last-named city he was, himself, an architect for a short time. He was best known, however, for his ability as a photographer and as the result of his early training and personal inclinations, he had special-

ized for twelve years or more in photographing architectural subjects, and attained enviable distinction in that field of activity. His work has been published in the leading professional papers which include *The Architectural Review*, *The Architectural Record* and *The Architectural Forum*, besides *Country-Life in America*, *House and Garden* and *The House Beautiful*, and collections of his photographs have been exhibited in New York, Boston, Philadelphia, Baltimore and in other cities. Mr. Buckley realized early the opportunity to make artistic compositions of architectural subjects, giving preference to the fast-vanishing remains of the Colonial style throughout the Eastern section of the country, from New England to Maryland. Much of this work has appeared in the *White Pine* series of architectural monographs which have been illustrated almost exclusively with prints from his portfolio. *The Architectural Review* is now publishing a series of his photographs of New England Colonial churches and other representative Colonial Architecture in New England. Mr. Buckley was forty-seven years old at his death which was caused by an abscess on the brain. In his social intercourse and business-dealings Mr. Buckley was sincere, honest and lovable, and extremely modest of his professional skill.

New Quarters of S. C. Camera Club

The Southern California Camera Club is now nicely located in its new quarters, 522 Wilcox Building, Los Angeles. New equipment has been provided, a first-class enlarging-outfit that will enable the members to use development-paper and thereby save expense. Elevator and janitor service and heat for the winter are also included. Monthly print-competitions are held which are open for entries to all outsiders. A new subject is assigned each month and notice of the results will be published in the papers. Three ribbons are awarded. An annual exhibition will be held this fall. The club meets every Thursday evening and meetings are always open to visitors. Each third Thursday is usually given over to lantern-slides and autochrome exhibitions.

Newark Camera Club's New Home

The Newark Camera Club had been eager for some time past to get larger quarters and a better location. This matter became urgent when the club was notified that the building it occupied was on the market and that the landlord could not renew its lease. A meeting was held, and in spite of adverse conditions, it was decided to look for new quarters. The Committee appointed found quarters at 878 Broad Street that seemed ideal for the purpose, although at a higher rent. A meeting of the members was called and the matter discussed thoroughly, with the result that it was decided to move. To meet the extra expense, it will be necessary to almost double the membership and the members are working strenuously to accomplish this without delay. To cover the cost of moving, a subscription list was opened and about $500 has been pledged.

On moving-day willing members soon got to work. Cameras, printing-frames and developing-trays gave place to hammers and saws, paint-brushes and plumbing-tools. The members undertook to do all the work themselves and it is now virtually completed. An excellent and thorough job has been made of it and the boys are justly proud. With three times the floor-space that they had in the old club-rooms and a much better location, the Newark Camera Club is now one of the best equipped photographic clubs in this country. The members are now looking for the recognition from camera-users to which they feel that they are justly entitled. In a city of about 500,000 people, there should be a sufficient number of people interested in photography to appreciate the benefits to be derived from membership in an organization of this kind.

One of the things that the Club features is, "Something Doing *every* Monday Night." Monday night is also "visitors' night," when any one interested in photography is made welcome. It was impossible to carry on this work during the month of June but on July first it was resumed. A good audience assembled to hear Mr. F. W. Dickerson, of the Eastman Kodak Company, describe a "Trip to Bermuda," illustrated by lantern-slides. The visitors were shown through the rooms and the club was commended highly on what it had accomplished. The Newark Camera Club was organized in 1888 and is one of the oldest and best known clubs in the country.

Arthur H. Farrow.

Tribute to Frederick Converse Beach

With our heads bowed in deep reverence and respect and our hearts filled with sorrow and yet gratitude—for well do we know that he has gone where life is no longer a struggle, where all things are beautiful and good—we, the friends and associates of the late Frederick Converse Beach, of New York, a man of literary and scientific talents, take this means to offer a just tribute to the memory of this co-worker—this man who has meant so much to us all.

We mourn the loss of one who was most worthy of our respect and regard; one who was always willing, ready and most eager to be of service to others; one who was charitable, in the true sense, in all his work of love, always cheerful—without thought of self or of personal desires—and we believe that this Association was one from which he derived much helpful recreation.

By the death of this man, the community at large as well as this Association has suffered an irreparable loss.

It is, therefore, resolved by the members of the Board of Managers of the *American Lantern Slide Interchange*, that this testimonial be sent to the various publications known to be in harmony with the work in which he was so active.

W. H. Rau, Photographic Society, Philadelphia.

H. W. Schonewolf, Buffalo Camera Club, Buffalo.

S. S. Johnson, Orange Camera Club, Orange, N.J.

O. C. Reiter, Photographic Section, Academy of Science and Art, Pittsburgh.

Organized in 1885 by Mr. Beach. Incorporated under the laws of the State of New York, Nov. 13, 1893. From the time of organization until his death, Mr. Beach was acting general manager.

Our Illustrations

(Continued from page 103)

by A. C. G. Allison. To assist at a better understanding of the composition, the following data are supplied: February, 10.30 A.M.; good light; $2\frac{1}{2} \times 4\frac{1}{4}$ Kodak; R. R. lens; stop, F. 16; 1/50 second; Eastman N. C. film; M. Q.; enlarged on Cyko with a B. & L. $\frac{1}{4}$-size portrait-lens.

LONDON LETTER

CARINE AND WILL CADBY

Yet another concentration of the photographic press of England has to be chronicled. This is so important a matter that it needs and merits a somewhat full explanation for American readers.

Soon after our last letter was sent off, the news that *The Amateur Photographer* and *Photography and Focus* were to be amalgamated into one paper, became public. The new publication will be known as *The Amateur Photographer and Photography*, and probably the followers of each of the old papers will continue to call the new issue by the name to which they have in years become attached, and so we shall probably still hear of *The Amateur Photographer* and *Photography*, although it will be all one paper. Mr. R. Childe Bailey (present editor of *Photography*) will become editor of the new paper, and Mr. Mortimer (editor of *The Amateur Photographer*) will be Art-Editor and, consequently, responsible for the four pages of superior paper giving examples of leading pictorial work which for so many years has been a leading feature of the A. P., and which it is proposed to retain in the new publication. The chief characteristics of both papers will be retained, and there are hints that even a new departure will be made in the form of photographically-autobiographical letters, contributed, week by week, by a well-known writer and photographer. The war-time price of the new paper is to be three pence, which is identical with the present cost of the A. P. *Photography* up to now has been published at one penny. This week sees the last issue of the old papers, and next week (the 19th of June) will appear the first number of the journal.

The owners of *The Amateur Photographer* (Messrs. Hazell, Watson & Viney) have sold the property to Messrs. Hiffe and Sons (the proprietors of *Photography*) and, no doubt, the amalgamation will make it easier to cope with the very difficult and severe conditions under which all newspaper-production in this country is at present suffering.

But the American reader must realize that ever since the early days of pictorial photography—or rather since the time when this same strange being found itself, and stirred uneasily for recognition and elbow-room, that is in the very early nineties of last century—there had been politics in the photographic world. We might almost liken them to the old real political Conservative and Liberal Parties, the latter voicing and supporting the Pictorialists. This position of champion of the new movement was quickly and unequivocally taken by *The Amateur Photographer*, and has been retained ever since, and Horsley Hinton, as editor, built up a great reputation on these lines both for himself and the paper. It would be too much to say that all the other papers were against the movement, for they were not, or at all events only intermittently. But they were conservative, at least in the early days. In the palmy days of photography, now long ago, there were many weekly journals devoted to its interests besides three monthlies. Now we have no monthly papers, and after this week there will be only two weekly journals devoted to the craft. There was the *Photographic News*, an old established paper that under the editorship of Mr. Mortimer and frank faith in the pictorial, took a new lease of life, eventually being absorbed in the A. P. when Mr. Mortimer became editor of that paper. A later production, named *Focus*, whose politics might be described as democratic-conservative, was absorbed by *Photography*. Amidst this welter of popular journals that all kept one eye on the ever growing multitude of amateur photographers, the *British Journal of Photography*, the old-established technical weekly, went serenely on its way, and still holds its unique, and perhaps to the non-scientific, rather dull position, unimpaired and unassailed.

But although times have altered, and all organs recognize pictorial photography, old hands have a way of thinking of the A. P. as the mouthpiece of the pictorialist, and *Photography* as the opposition. And now we have these two popular journals, that had each swallowed and digested a cotemporary, fused into one, which is the counterpart of a coalition government of the country and, no doubt, a wise war-time measure conducive to strength and vigor, and we wish the new paper a long and successful career.

We are almost ashamed to mention another photographic exhibition of war-pictures; but facts must be recorded. This time it is at the Grafton Galleries W., and is composed of Australian official war-pictures and photographs, and embraces views of Galipoli, the Western Front, and Palestine. An interesting feature is that the whole show is run by Australian soldiers, even to the money-changer at the door, and very pleasant and chatty attendants they make. There is one room filled with war-paintings by the five official Australian artists, and the remainder of these big galleries is devoted to photography. There are two enormous enlargements, about 18 x 14 feet, one very ambitiously conceived; a regular battle-piece, with soldiers fighting in the trenches, shells bursting, and many airplanes immediately overhead. But in spite of the crowded incident it did not seem convincing and the companion picture on the opposite wall, a quiet study of Anzac Cove, far better brought home to one the realities of the war, perhaps, by its very omissions. Many of the photographs are excellent, especially those of tanks erossing really rough ground; but it has all been equally well done before, and Australians at a little distance are strangely like the home-grown article. The Color-Section was composed of color-slides the originals of which were made by Captain F. Hurley, shown at intervals in a large, darkened hall. The slides were from the Paget Prize Plate Co.'s Color-Process. These real color-plates, without a suspicion of any sort of hand-work, were very effective, and a relief after the so-called color-prints of other exhibitions. To many of them, being of eastern subjects, the addition of color was a great help in the expression of the beauty and novelty of the scenes. A lecturer—an Australian in khaki—explained each subject as it was thrown on the screen.

Of the many photographers who, since the war, have given up photography for other occupations, Ward Muir is one who has, metaphorically speaking, looped the loop, and is now once more photographing and writing, and serving his country.

He has been released from the army at the request of the Ministry of Information. His book, "The

Observations of an Orderly," brought him to the notice of those authorities who are not quite so blind and hide-bound as a certain section of our press would have us believe. Anyhow, they discovered in him a valuable instrument for propaganda-work, and to that he is now devoting his camera and his pen, and his articles are being translated into ever so many different languages for publication abroad. This ministry could hardly have chosen more wisely, for anyone who knows Ward Muir will be sure that there is a brain behind his methods and that they will be of the really convincing and not the obvious order.

He has been employed by his chief in all kinds of odd ways and, quite lately, has been allowed to make voyages in an airship over the Atlantic. He spent last week-end with us, and as he was telling us yesterday about the rescue of a torpedoed crew and other exciting incidents of his trips, we were taking mental notes of these interesting—and photographically interesting, too—experiences, to retail to our readers of this London letter, when, alas! all our hopes were dashed and we learned that we must keep all these camera-adventures to ourselves, as nothing was to be known about them till they are less novel—"in fact," as Ward Muir said, "until no one is any longer interested." He had prepared some illustrated articles on the subject, but is not allowed by the censor to publish them just yet, so it is useless our trying to tell our readers of the interesting facts they reveal.

We have been at the sea lately and had also seen some sea-plane bombing-practice. It was one of the incongruities of war-time that not even a vest-pocket kodak was to be found among the crowd of interested spectators on the shore, so cameraless have we all been drilled to be.

Plate- and Film-Changing

In the days of the wetplate, single plateholders were used, accommodating only one plate at a time, as it was necessary to sensitize the plate immediately before exposure, and to develop and fix it immediately after. This necessitated the carrying of a portable darkroom or tent.

With the advent of the dryplate came the single or double plateholder, and this is still in common use, especially with field-cameras. The number of plates that can be thus carried is limited only by the number of holders; but this in turn is limited by reason of their weight and bulk. Unless an altogether unusual number of plates are to be exposed, the plateholder-method is, on the whole, the most convenient for the amateur.

There is sometimes a tendency for the wooden shutter of the plateholder to run stiffly, and even to stick altogether, owing to the swelling of the wooden tongue that runs in the groove of the frame. This can be remedied by well rubbing the tongue with a lead-pencil, the polish of the lead serving as a lubricant. It is advisable to make a pencil-mark on the black back of the slide when fully drawn, and to see that this is always visible before an exposure is made. If the slide is made to pull right out, care must be taken in reinserting it; the edge must be inserted along its whole length at once, as putting one corner in first opens the light-trap and fogs the plate.

A changing-bag is sometimes used to facilitate emptying and reloading plateholders without recourse to a darkroom. This bag is made of two or more thicknesses of black and red fabric, with sleeves for inserting the hands, and an opening for introducing the holders and plates. In some patterns the changing is done by touch alone; but in others there is a ruby window and eyepieces, so that the eyes can be used as well.

A substitute for the ordinary plateholders is the changing-box, which is generally made to carry a dozen plates in metal sheaths. This is a convenient arrangement in the case of box-form cameras; but it is too heavy for use with most field-cameras. In some cases, the exposed plate is changed from front to back; in others the fresh plate is taken from the back and placed in front of the one last exposed. The former arrangement has the advantage that exposed plates can be removed without disturbing those still unexposed. In both cases, the plate to be shifted is raised into a flexible leather-bag and the changing done by hand. This must be done carefully, so that the sharp corners of the sheathed plates are not forced through the leather.

When the changing-box is so designed that the pushing in of the slide forces the front plate into the bag, there is the occasional disadvantage that the plateholder cannot be closed if for any reason an exposure is not made, unless the plate is at the same time changed while still unexposed.

There are also several arrangements for using a single plateholder of special pattern, and inserting as required plates contained singly in light-proof envelopes. The Mackenzie-Wishart system is the most familiar and popular type. Each plate is inserted separately in a stout envelope, which is opened and closed by the action of the draw-shutter of the special slide designed for its use. By this means plates of various kinds can be carried and used at will, and any number of plates can be exposed and developed, from a single one up to the limit of the envelopes carried. In carrying daylight-envelopes, it is necessary to carry and handle them so that there is no risk of opening the flexible fronts however slightly. The safest way is to pack them in a case on edge, so that when one is lifted out there is no effective pull on the front.

In a magazine-camera, the plates are carried in metal sheaths, and by a mechanical arrangement each plate after exposure can be dropped to the bottom of the camera. There is no better system when it is required to make a number of exposures in very rapid succession. In changing plates by this method, the camera should be held perfectly level from side to side, but slightly tilted down from back to front. Every care should be taken not to bend the sheaths, or the changing-mechanism is likely to fail.

Flat films, with or without special sheaths or holders, can be used and changed in all the ways mentioned for plates. A special plateholder is also used into which can be placed a pack of films in one block, and these are changed in a very ingenious manner by pulling a projecting tab for each one. By suitable adapters the film-pack is available for use with most small cameras that have plateholders.

The most widely-used method of daylight-changing is that embodied in the spool of roll-film. By no other means can the material for so many exposures be carried so easily. There are two important matters to be borne in mind regarding the use of those daylight film-cartridges. The first is that the film and its paper-protection must never be allowed to run slack on the spool, either when filling or removing. The second is that the film should never be wound along while the camera is closed, if there is any possibility of the bellows or anything else being in contact with the surface of the moving film.

W. D., in *Photography*.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

PHOTOGRAMS OF THE YEAR 1917–18. The Annual Review of the World's Photographic Work. Edited by F. J. Mortimer, F. R. P. S. 32 pages text; 86 halftone-reproductions. Price, stiff paper-covers, $1.50; postage according to zone. London: Hazell, Watson & Viney, Ltd.; New York: Tennant & Ward, 103 Park Ave., American publishers.

The latest edition of this delightful annual review of the world's photo-pictorial activity has come to hand, and a most creditable production it is, despite unprecedented obstacles and conditions. The wonder is that it is published at all; but with true British pluck Mr. Mortimer stuck to his guns and helped accomplish the task. As a collection of pictures of the last word in photo-pictorial art, the present series is remarkably interesting, and in merit equals the best of its predecessors. No apologies are necessary. American pictorial photography is represented by twenty-six contributions, an unusually large percentage, among which the most noteworthy are genres by Clarence H. White, C. W. Christiansen, E. G. Dunning, Williamina Parrish, Dwight A. Davis, Francesca Bostwick, John Paul Edwards, Jesse T. Banfield, Sidney V. Webb, and W. G Fitz; portraits by Pirie MacDonald, E. H. Weston, James N. Doolittle, Margaret Mather; an outdoor nude, by Arthur F. Kales; landscapes by W. H. Porterfield, Fred R. Archer, Karl Struss and Dr. Percy Neyman, and a beautiful architectural subject from the San Francisco Exposition, by W. H. Rabe. English pictorialists, who appear at their best, are Herbert Lambert, "Young England"; Malcolm Arbuthnot, "Fantasy"; the Earl of Carnarvon, nude dancing-girl; Alexander Keighley, a wonderfully lighted wood-interior; Frederick H. Evans, Norman chapel interior; H. Essenhigh Corke, portrait of Frank Fenner, Esq.; James McKissack, "Castle of Harburg"; Angus Basil, "Marga"—striking lighting-effect; John H. Anderson, "Quai de Paris"; John M. Whitehead, "Cloudy June"; Bertram Park, "Mlle. Seraphine Astafieva in 'L'Oiseau Indien'"; A. H. Blake, "The White Monument"; Walter Benington, "Miss Margaret Morris as 'Poisson D'Or'"; J. B. B. Wellington, "Mother's Jewels"; Marcus Adams, "Fifine" (portrait of young girl); Charles Job, "A Canal, Holland"; Edward Muir, "Edinburgh in Winter"; C. H. L. Emanuel, "Washing up." Holland is represented eminently by Richard Polak, "Teaching Polly"; Bern. F. Eilers, "Canal-Scene"; C. Ulrich, "The Dance"; J. F. J. Huysser, "Interior of Church at Vollendam"; A. T. Weinberg, still-life, and F. J. Mortimer, "All's Well!"—an ingeniously contrived marine of topical interest. Other delightful subjects are by workers in Australia, Canada, Sweden, Italy, Spain, India, Egypt, Japan and Persia.

The pictorial qualities of the illustrations are reviewed by W. R. Bland in an intelligent, authoritative manner, which adds greatly to the beholders' enjoyment. The rest of the text consists of "The Year's Work," by the Editor; "Photography's Part in the War," by Ward Muir; "Pictorial Photography after the War," by Antony Guest; "Pictorial Photography in Australia," by Cecil W. Bostock; "Pictorial Photography in America," by W. H. Porterfield; "Pictorial Photography in Scandinavia," by Henry B. Goodwin; "Pictorial Photography in Holland," by Adriaan Boer; and "Pictorial Photography in Spain," by José Ortiz Echague. Apart from the sentimental interest created by the current edition of *Photograms*, the pleasure, education and news-value of the work will appeal successfully to the technical student and the picture-lover. The supply in the hands of the American agents is limited to estimated needs and will not last long. Apply at once to your dealer or to PHOTO-ERA.

OPTICS FOR PHOTOGRAPHERS. By Hans Harting, Ph.D. 224 pages. 57 diagrams. Price, cloth, $2.00. Boston, U.S.A.: American Photographic Publishing Company.

Most of the chapters that compose this work were translated originally for, and published serially in, *American Photography*. The author is Dr. Hans Harting, for a period of years the technical director of one of the largest photo-optical works in Europe. Dr. Harting is a physicist of high repute and the computor of several important lens-systems that include the Heliar, so that his views on photographic optics, as set forth in the present work, may be regarded as correct and authoritative, and a valuable aid to photographers who desire ready information about the lenses they employ. The photographer who performs his technical work in a mechanical rather than in an intelligent way, is clearly at a disadvantage; but a clear comprehension of the character and scope of his lenses and other apparatus will enable him to detect the cause of failures and suggest their correction. All the ills which a badly constructed or uncorrected lens is heir to; the various types of recognized standard lenses, their possibilities, and limitations and physical structure; the many varieties of optical glass, its manufacture and adaptabilities to the different types of lenses; the optical photographic image, its origin and character; the circles of confusion; speed of camera-lenses, how claimed and how determined—these are some of the many subjects treated lucidly and concisely by Dr. Harting. The publishers have carefully revised the work and brought it up to date; even metric dimensions have been converted to meet the needs of American camera-users.



Big Profits For the Get-Rich-Quick

IT is strange, but true, that the people who devise schemes to get rich quickly, seem to succeed admirably They live in style, can afford all the luxuries and have no cares. All they have to do is to rake in the money from gullible, nay eager, buyers of their worthless stock. And the buyers of this worthless stock? Why, they get rich, too; but by such slow degrees that bricks will produce gold before they get their first installment of the promised ten per cent. dividend.

But let them cheer up. They can now purchase stock (for less than par, if they get "next" to one of the directors) in a company recently organized to take the wrinkles out of prunes.

RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER

The following patents are reported expressly for the Photo-Era Magazine from the patent-law offices of Norman T. Whitaker, Whitaker Bldg., Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps.

Howard A. Burkhart, Petersburg, Indiana, has invented a Photographic Developing-Machine which is disclosed in his patent No. 1,265,169.

A Photographic Washing-Apparatus has been patented by Wilhelm Bergman, Arlington, N.J. The patent is No. 1,265,291 and has been assigned to B. and B. Photo-Co., a Corporation of New Jersey.

A patent No. 1,265,371 has been issued to William A. Peters of Chicago, on an Attachment for Photographic Cameras. Patentee has assigned his rights to International Patent-Licensing Corporation, Chicago, a Corporation of Delaware.

George Peter Koch of New Brunswick, New Jersey, has been granted a patent on a Camera, No. 1,265,456.

Patent No. 1,265,464 on Photographic Paper has been issued to Alfred C. McCloskey, Philadelphia, assignor by mesne assignments of one-half to himself, one-fourth to A. Elton Davis, and one-fourth to Frederick J. Geiger, Philadelphia.

William M. Thomas, New York, N.Y., has been granted a patent on a Camera, No. 1,265,699. Patent-rights have been assigned to Thomas Oberkirck Company, Limited, New York, N.Y., a Corporation of New York.

Patent No. 1,266,557 on Film-Forming Electrolyte has been granted to John Coulson of Wilkinsburg, Pa., assignor to Westinghouse Electric and Manufacturing Company, a Corporation of Pa.

Stephen Eugene Odell, Bellingham, Wash., has invented a Panoramic Camera which is disclosed in his patent No. 1,266,616.

Patent No. 1,266,810 on a Camera has been issued to John Ludvig Johnson, Seattle, Wash.

A patent, No. 1,266,001, has been granted to Bertram L. Dickason, Council Bluffs, Iowa. The invention is a Drying-Cage for Photographic Films.

William R. Schwab, Kansas City, Mo., has been granted a patent on Photographic Apparatus, No. 1,266,060. The invention has been assigned to The Cameragraph Company, Kansas City, Mo., a Corporation of Arizona.

Patent No. 1,266,111 on Photograph Enlarging-Apparatus has been granted to Thomas Arthur Evans, Chicago, and Lynn A. Salisbury, Elgin, Ill.

Niels M. Hansen, Toledo, Ohio, has invented a Film-Holder, patent No. 1,266,254. The invention has been assigned to Paul L. Reichert, Toledo, Ohio.

Patent No. 1,266,319, Winding-Key for Photographic Film-Cameras, has been granted to William A. Riddell, Rochester, N.Y., and assigned to Eastman Kodak Company, Rochester, N.Y., a Corporation of New York.

Patent No. 1,266,323, on a Film-Pack Adapter for Cameras, has been granted to Alfred A. Ruttan and Charles E. Hutchings, Rochester, N.Y. They have assigned their invention to the Eastman Kodak Company, Rochester, N.Y.

Patent No. 1,266,385, on Photographic Printing-Machine, has been granted to Frederick W. Barnes, Rochester, N.Y. It has been assigned to the Eastman Kodak Company, Rochester, N.Y.

William F. Folmer, of Rochester, N.Y., has invented a new Photographic Shutter-Mechanism, patent No. 1,266,443. He has assigned his invention to Eastman Kodak Company, Rochester, N.Y.

Patent No. 1,266,491, on Roll-Film Developing-Apparatus, has been granted to Robert Kroedel, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y.

Patent No. 1,267,055, on a Trimmer for Photographic Prints, has been issued to Robert M. Cathcart, Ballston, Va.

Patent No. 1,267,159, for Photographic Plateholder, has been granted to Samuel G. Zuckerman, New York, N.Y.

Patent No. 1,262,635, for Photographic Exposure-Meter, has been granted to Silas J. Cady, Dallas, Tex.

A Backing

For use when ready-backed plates are not available, I find the following backing invaluable. It is made by dissolving asphaltum in chloroform until the liquid is appreciably thickened. The exact proportions are immaterial, and I have never ascertained what they are. It can be poured on and off, or, if there is any fear in this method of getting it on the front, it may be applied with a brush or rubbed on with a piece of rag. The backing dries very quickly, and, if not too thickly applied, the progress of development can be seen through it. I do not remove it until the negative is finished and dry, when it is cleaned off with a little benzole.

W. Stirling, in *Photography*.

Praise for June Photo-Era

Ilion, N.Y., June 19, 1918.

Dear Sir:

Enclosed find two dollars for which please enter my name on your subscription-list, for the year 1918.

I have just learned the value of your magazine by reading your wonderful June issue, and would like very much to receive the back numbers from January up to date, if you can possibly supply them to me.

If you cannot do this, please begin my subscription with the July issue and advise me by letter, using enclosed stamp for postage.

The article, by Frederick B. Hodges on the subject "The Lake," with illustrations from the grand old Adirondack lakes, is alone worth the price of subscription. Mr. Hodges and son must, indeed, be characters with whom an acquaintance would be of value inestimable to any nature-lover.

Very truly yours,

Charles H. Barnes.

To

Mr. Wilfred A. French,
Editor, Photo-Era, Boston, Mass.

WITH THE TRADE

Bausch & Lomb Optical Co.'s Flag-Raising

Among the events in the long and brilliant history of the Bausch & Lomb Optical Company, Rochester, N. Y., none equaled the demonstration of the firm's loyalty to the American flag as expressed by the ceremony of raising Old Glory to the top of a new sixty-foot steel flag-pole at the St. Paul Street factory, June 14, 1918. The exercises were elaborate and included the recitation by the entire assembly of "America's Creed" led by Mr. Edward Bausch; a patriotic address by Mr. William A. E. Drescher; a preliminary concert by the Bausch & Lomb military band under the direction of Theodore Dossenbach; the singing by the multitude, of the "Star-Spangled Banner" and "America," and the reading of a letter from Brigadier-General C. C. Williams, Acting Chief of Ordnance, N. A., expressing appreciation of the governmental work being done at the Bausch & Lomb plant. The celebration proceeded in the presence of about 5,000 employees, company officials, army and navy officials and other invited guests. The ceremony of raising the flag was performed by two army-officers, and the entire program was carried out smoothly and amid great enthusiasm.

A Practical Kodak Course

Unquestionably, there is need of suitable, practical instruction for amateur-photographers. Such a course is now offered by the Clarence H. White School of Photography, at Canaan, Conn., July 29 to August 17, 1918. Amateurs who desire to become proficient photographers and to enjoy a vacation at the same time should write at once to Clarence H. White, 122 East 17th Street, N. Y. City, for descriptive folder.

New Catalog of David Stern Company

The new catalog, No. 102, issued recently by David Stern Company, 1027 Madison Street, Chicago, contains much of interest and value to every amateur and professional photographer. Several new lines of merchandise have been added to the already large stock on hand. We are informed that the exceptional values offered are due to extensive pre-war purchases. A special schedule has been added in the shipping-department, which receives every order the moment it enters the house and places on that order a schedule at which time it must leave the store. In this way, the company is able to make shipments more promptly and efficiently—in fact, 95% of its orders are shipped the day they are received.

A well-managed service-department is helping customers from all over the country to solve their camera-problems. The new iron-clad guaranty is worthy of attention. Goods must prove satisfactory or the money is returned. There is no quibbling, nor a desire to have the customer make another selection, etc. The new catalog is one that every camerist should possess without delay. In view of the demand for copies, readers of Photo-Era will do well to write at once in order to avoid disappointment

The Practical Exposure Disc

Among the photo-novelties of the season is The Practical Exposure Disc. It is a handy device consisting of three white celluloid discs, 2¼", 3" and 3½" in diameter, made to rotate on one common axis, and provided with a table and figures necessary to determine the length of exposure of a film or dryplate, also Lumière Autochrome, Dufay Dioptichrome or Jougla Omnicolor plates. The disc is arranged for daylight-saving time, and indicates the clock-time, which, under the Daylight-Saving Law, is from the last Sunday in March to the last Sunday in October, each year. The list of plate-speeds, found with the working-directions on the back of the disc is compiled from Hurter & Driffield measurements for use with the Practical Exposure Disc. The method of operation requires one turn of each of the two smaller discs, and the length of exposure is read against the size of stop used. The price of the disc is $1.00, and is made and sold by the American Photographic Publishing Co., Boston, U.S.A.

Future of German Metol

Speculation as to the future of German Metol in America is but guess-work. Whether or not these goods will be the objects of discrimination after the war, is purely conjectural. In view of the German photographers' recent action against American cameras and other photo-products, surmise is enlivened, Probabilities are that conditions obtaining at the cessation of hostilities will affect matters. It does not seem possible that Germany can underrate the value to her of American markets.—*American Photographic Dealer.*

A Disillusionment

When we wrote pleasantly, and hopefully—several years ago—of an individual formerly prominently associated with the dryplate-industry in America, and shortly afterwards as the organizer of a new and similar enterprise, we supposed that the latter was founded on strictly honest business-principles. We inferred this from the fact that he had been identified for a number of years with a firm that has occupied, and still occupies, an honorable position in the photographic trade. To our astonishment, and extreme regret, we are forced to admit our mistake. The erstwhile dryplate-expert soon threw off the mask, and now stands forth as one of the most diabolical frauds in the photographic industry at the present time. He has cast honor and patriotism to the winds, and prospers only because his country's attention is centered upon this great war and, at the same time is engaged in curtailing the evil activities of enemy-agents in this country. The Administration may seem to have postponed, but has not abandoned, its investigation and punishment of concerns that are engaged in fraudulent enterprises, rather than helping to win the war by putting their energies to patriotic uses. Let concerns who try to profit by our Government's present diversion beware! Their undoing may be deferred, but it is as sure as fate!

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PHOTO-ERA

The American Journal of Photography

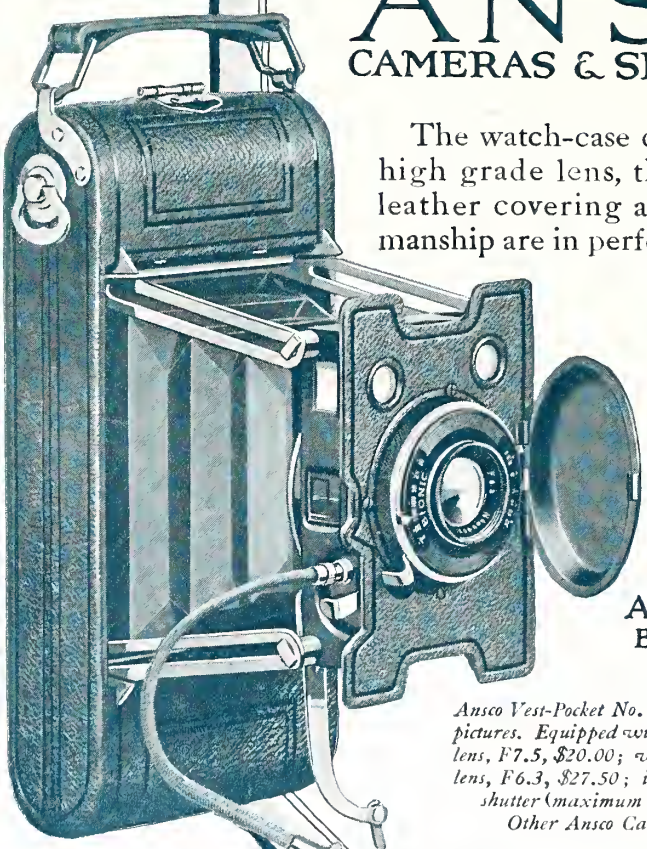
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The Right Camera for These Stirring Times

Picture opportunities are plentiful. Be ready for them with the Ansco V-P No. 2. It rests so lightly in your pocket, and gets into action so quickly, that you will want to carry it with you always. Its fast anastigmat lens, in exclusive combination with a simple micrometer focusing device, assures pictures sharp and clear in every detail.

ANSCO
CAMERAS & SPEEDEX FILM



The watch-case cover protecting the high grade lens, the genuine fine grain leather covering and the superb workmanship are in perfect harmony with the pictures it takes, and unite in making the Ansco V-P No. 2 a camera which you will be proud to own.

Write for specimen picture on Cyko Paper. Then ask the Ansco dealer for a demonstration.

ANSCO COMPANY
Binghamton, New York

Ansco Vest-Pocket No. 2 makes 2¼ x 3¼ inch pictures. Equipped with Modico Anastigmat lens, F7.5, $20.00; with Ansco Anastigmat lens, F6.3, $27.50; in Extraspeed Bionic shutter (maximum speed 1/200 second). Other Ansco Cameras $2.75 up.

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To Contributors: Contributions relating to photography in any and all of its branches are solicited and will receive our most careful consideration. While not accepting responsibility for unrequested manuscripts, we will endeavor to return them, if not available, provided return-postage is enclosed. Authors are recommended to retain copies.

To Subscribers: A reminder of expiration will be sent separately at the time the last magazine of every subscription is mailed. Prompt renewal will ensure the uninterrupted receipt of the magazine for the following year. Send both old and new addresses when requesting a change.

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THE TAR-BOILER
FLORENCE AND KARL MAYNARD

PHOTO-ERA

The American Journal of Photography

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Vol. XLI **SEPTEMBER, 1918** **No. 3**

Camouflage-Effects in Nature and Their Relation to Photography

WILLIAM S. DAVIS

WITHIN the last few years much has been said about "camouflage," the term being used to cover many different methods of concealing objects, or confusing observers as to their true character; but although the term is new—at least to English speaking people—what it stands for is as old in principle as nature itself. Naturalists and students of nature-phenomena more frequently speak of such effects among animals, plants, etc., as "protective coloration."

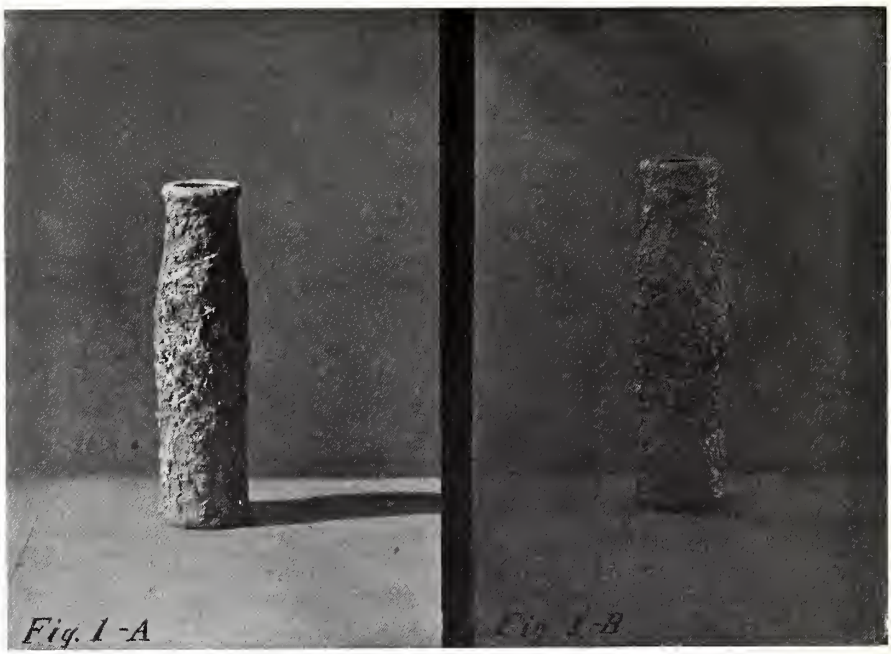
Imitation of natural surroundings to hide objects or persons is an ancient practice; but there is no doubt whatever that the idea has been developed within the past four years to a point far beyond anything ever conceived before; not only in the number of different methods employed to meet particular requirements, but in the more scientific application of the principles that govern light and color. From illustrations and accounts which have been published, it is evident that such primitive means as covering guns and other objects with tree-branches, or screens composed of boughs and grass, is still practiced extensively as a means to deceive the enemy—particularly airplane-observers—and great attention is given to the selection of colors for uniforms according to the character of the surroundings, for example, the famous Alpine troops of Italy, who wear white uniforms for their mountain-fighting over snow and glaciers. Doubtless, the attention of the general public has been caught more by the peculiar, and often astonishing, effects obtained by the help of paint-pot and brush, either by painting the objects themselves until they look like what the Editor of *The Independent* in referring to some camouflaged ships aptly called, "chromatic zebras," or by creating deceptive details on canvas-screens, behind which troops and supplies may be stationed.

Broadly speaking, there have sprung up two classes, or "schools," of camouflage-practice; one aims to obliterate objects literally by so painting them—or concealing them by suitable colored screens—that the objects blend in perfectly with their surroundings; the other depends for success upon confusing an observer as to the true shape or character of what is visible. Of course the latter method is especially useful when the size or location of any object renders concealment impossible under changeable conditions of light. In the case of ships, it has been found possible to alter completely the apparent shape of the hull and upper works by painting false outlines of important parts, such as a different shaped bow or stern, or breaking up the surface in various other ways. One magazine, not long since, published the picture of a vessel on whose hull had been painted what appeared to be a wavy line of white foam streaming back from the bow. This gave the impression that the ship was steaming at a high rate of speed, when the reverse might be the case. Indeed, the photograph was claimed to have been made while the ship was lying still. It can be seen readily that such an effect might easily cause an enemy gun-pointer to miss his aim by misjudging the allowance to be made for the distance traveled by the ship in the interval between firing and the time the shell strikes.

No doubt the reader has seen many pictures of old wooden frigates and "three-deckers." These constituted the first line of naval defense before the days of modern fighting-ships. The reader will recall the manner in which the hulls were painted in white bands broken up at short intervals by the gun-ports in rows along the

side. It may not be generally known that the merchantmen of those days when they were sent on long voyages to parts infested with pirates and privateers were usually camouflaged to resemble ships of war by painting false gun-ports upon the hull. The ruse worked generally, for the pirates would not attack what appeared to be a heavily armed ship except under the most favorable battle-conditions.

The foregoing brief and necessarily generalized survey of a few forms of man-made camouflage is mentioned by way of leading up to a consideration of how nature accomplishes similar results, for everywhere one can find examples. In the animal-world, the stripes upon the tiger and zebra are instances of the way nature protects wild animals amid their natural surroundings by providing them with "protective coloration." When transferred to the cage of a zoological garden the gorgeous yellow and black striping of a tiger seems about the most unsatisfactory combination for concealment; yet, the very contrast and vivid color blends so well with the streaks of yellow sunshine that alternate in the dark shadows of the tiger's jungle-home that the hunter can seldom separate the body from the surroundings until it is revealed by a quick movement of the animal. So, too, the wavy vertical marks on the zebra blend with the tall grass of its feeding-places, even motion of the animal being less noticeable when the grasses sway in a breeze. Snakes are noted for their protective coloring. For this reason, the venomous kinds in particular are far more dangerous than would otherwise be the case. The polar bear in his white fur-coat, merging in tone and color with the light and shadows of the ice-floes and snow-covered shores, affords another striking example of adaptation to surroundings. In the case of small animals, especially those which make their homes in burrows or around trees, one will usually find their color gray, brown, or reddish-brown, which thus conforms with the prevailing tones of their habitat. Even the most observant naturalist finds it difficult to distinguish a tree-frog from its leafy abode or a bittern-nest from the friendly reeds in the swamp. The difficulty to follow the movements of a squirrel in a tree is a familiar example which most readers must have experienced. As to the birds, it can hardly be considered an accident that those which possess the most brilliant colors should come to the northern states during the warm



FIGURES 1A AND 1B WILLIAM S. DAVIS



FIGURE 2 WILLIAM S. DAVIS

season, when the brighter tints of foliage and flowers afford greater protection, and that the sparrows and other birds of sober plumage are the only ones commonly seen in winter, when the trees and bare fields afford them protective cover. The spotting and blending of color on many waterfowl is in accord with the play of light and color in both marshy shores and rippling water. A gull, for example, riding on the surface or circling low over the waves on a windy day is very difficult to distinguish from the white-capped crests of the waves.

Every student of nature can mention the trouble he frequently has to locate some wild plants in their habitat, owing to the closeness with which they match the surroundings of woodland or meadow. The same thing holds good to a marked degree with regard to insects and their favorite plant-foods. Even a brilliantly spotted butterfly or moth matches the hues of a mass of flowers to a surprising degree. One might go on giving references of a similar character, but enough has been said to indicate how frequently camouflage occurs among living things; but it may be pointed out that in this, as well as the artificial kind, it works out successfully only when objects are seen amid what may be termed their normal setting, and in every case the many shifting-effects produced by variation in lighting and atmosphere are highly important factors, according to circumstances, either to enhance or to destroy the camouflage. In fact, so powerful is the influence of transitory highlights and shadows that these alone sometimes produce a camouflage-effect by mixing up the true forms and local colors or objects in an unexpected manner. The reason for this is evident when one stops to consider that our knowledge of the shape of any particular detail of a scene is very largely dependent upon its true outlines and thickness as revealed by the natural play of light over the surface, thus producing gradation of light and dark tones which serve to bring out the contours and texture of each part. But when, for any reason, some peculiar combination of light and shadow is brought about—as, for instance, the mottling of light spots on an object when strong sunshine comes through a network of foliage—the eye is readily confused as to the actual shape of details owing to the transient effect superimposed upon the actual objects that compose the scene. What is termed "local-color"—the color of any object under normal conditions of illumination and uninfluenced by intervening atmosphere—is commonly a help to the eye when sufficiently different from that of surrounding parts. Even this does not always hold good, as every color is subject to innumerable variations of tint, and sometimes complete transformation to another color—simply from alteration in the color or strength



FIGURE 3 WILLIAM S. DAVIS

of the light—which in turn may be brought about by some obstruction between the source of light and the object under observation, or from varying states of the atmosphere.

Mr. Abbott H. Thayer, the noted painter, who gave an exhibition in Boston, recently, of illustrations showing many years' study of natural camouflage, summed up the principle in one of his explanatory notes by saying: "The basic fact in all this camouflage is that wherever one turns one's eyes, and most of all in the big outdoor-spaces, one sees a million marks, dots, lines, etc., every one of which is simply some solid thing, a leaf, a branch, or a hole through which one sees to things beyond. Now, because a million to one of all these marks are really separate objects, of course, the spectator is doomed to conceive that any other marks he sees in the midst of all these things are simply solid objects. It follows, therefore, that in such a scene all marks and patterns worn by any object whatsoever, animate or inanimate, overwhelmingly tend to pass for detached objects, and when in addition they are done in actually perfect color-imitation of details of the scene, of course, they deceive to the last degree."

As we have seen, not only the markings of a permanent character—such as spots or stripes on an animal—are a source of possible concealment or deception as to the true shape, but transitory tricks of sunshine and shadow likewise cause many spots and gradations in tone which do not always conform to the true lines of individual objects that compose a scene. Therefore, painters and pictorial photographers, when studying the possibilities of material for an artistic composition, are accustomed to consider the relationship of these units of tone and color, one with another, over the entire area of the picture-space selected, working all the time to arrange the larger masses of tone into a harmonious pattern of light and shade; so that although a certain amount of camouflage is natural—and frequently desirable in the minor details to render them unobtrusive—it cannot be considered an attractive element to introduce throughout a composition because of the confused feeling produced. The pictorialist seeks to avoid anything of the kind in the larger masses of the scene by selecting working-conditions—or rearranging parts, when possible—that will bring out the forms of the leading parts in a satisfactory manner. Consequently, it is desirable to know the cause of camouflage-effects, if only to have a better idea of how to avoid them in general pictorial photography.

A feature which photographers contend with constantly—and which is a cause of many puzzling failures to beginners—is the difference in effect produced by changing color-combinations into monochrome. For what appears quite clear and distinct to the eye may produce a decided camouflage-effect, owing to different colors which are adjacent to one another being so nearly equal in tone-value as to merge together in a photograph. Take, for example, a scene that shows orange-yellow flowers against a background of misty blue hills or sky. To an observer the contrast is great, since these colors are complementary to one another. Owing to the well-known tendency of "warm" colors to catch the eye first, they are often said to "come forward" and the orange-yellow will seem to be lighter as a rule than the background; yet, the chances are that both colors are so nearly of the same value that a photograph made upon a color-sensitive emulsion with correctly adjusted color-screens would yield a very flat and uninteresting picture. In such circumstances, the only way to make the visually brighter color come lighter in tone, photographically, is to use a color-filter deep enough to produce over-correction—to hold back the "cool" color more than the other. However, such treatment is likely to prove objectionable in a subject that contains a considerable variety of color and tonal gradations, as it upsets their normal relationship, sometimes giving an effect which is noticeably unnatural. Of course, the best solution is to select, if possible, a time when the lighting or arrangement of parts gives sufficient difference in tone—as well as color—to photograph in a satisfactory manner.



FIGURE 4 WILLIAM S. DAVIS

Every one knows the peculiar action of certain colors upon plain bromide of silver plates, due to the fact that their sensitiveness to various tints differs materially from the visual luminosity of the same tints to the eye. Even orthochromatic and pan-chromatic emulsions require an adjusted filter to obtain a perfectly balanced rendering of certain colors. But the



FIGURE 5 WILLIAM S. DAVIS

ordinary plate is highly sensitive to blue and violet, only slightly to yellow, and not at all to red or deep orange. For instance, it is easy to see why in landscape-work, white clouds usually disappear in a blue sky—which itself records virtually white in the photograph—and brightly tinted flowers are rendered as spots of inky dark, producing a highly unnatural result as compared with one's visual impression of the scene. Occasionally, such differences in actinic sensitiveness may serve to separate details which appear to merge and to produce a camouflage-effect to the eye; but it is never safe to count on this, but rather to study the tonal gradations in a subject before making an exposure. Form the habit *to pay especial attention to the comparative tonal values of the various colors* independently of the colors themselves—then try by means of suitable plates and color-filters—to obtain a true translation into monochrome. If the arrangement of tones was satisfactory to the eye the photograph will also be satisfactory. By way of "pointing a moral"—even though they may not be sufficiently attractive to "adorn the tale"—I am presenting a few illustrations, together with some explanatory comments that may help.

Figs. 1A and 1B. These were made as a simple demonstration to bring out the point touched upon regarding the influence of lighting upon the result. For the purpose I picked up one of the first things at hand—a small painted flower-holder decorated with variegated spots of soft color. A sheet of slightly mottled gray-paper of the same general tone served as a background, and a piece of darker plain paper was used over the support for the vase. The difference between the two studies is due entirely to a change in lighting. 1A was made by a strong side-light from a window about four feet away, producing a scale of gradation from light to dark which reveals the cylindrical shape of the object and, at the same time, separates it from the background. 1B, on the other hand, was made with the vase illuminated by very diffused light, which—tested by a Wynne meter—proved to be sixty times weaker than the lighting for 1A. For a subdued and broadly diffused lighting virtually eliminates any play of light and shadow upon the surface of an object. In this case, the effect has been a flattening of the contours in the vase and, by the removal of lights and shadows, an almost complete blending with the background—a "camouflage" result—is obtained.

Fig. 2, made several years ago, shows a bit of the waterfront near the upper part of Riverside Drive. Although close inspection may enable the reader to discover what, to me, was the principal feature of interest—the hulk of an old wooden "three-decker" moored to the shore—the details are decidedly blended with the surroundings.

Fig. 3 suggests what "protective coloration" may do to obscure objects. The subject is a bit of a well-known train-yard, and I wished to make the main feature a train with the smoke and steam from the locomotive; but the prevailing red and brown tints on the train caused it to blend with the row of brick buildings which composed the background.

Fig. 4 is an instance where the camera gave much more of a camouflage-effect than was noticeable to the eye, as the color of the animals was distinct from their surroundings; but in the photograph this was lost. The spotting of light and shadow, caused by strong sunshine coming through the foliage, broke up the natural outlines of objects into more or less detached patches.

Fig. 5. This might be entitled, "Lost: five cows in a pasture. Reward to the finder." There are really five cows included in the picture, but in the picture they appear so nearly the color of the background that cows and background are difficult to separate. A lighter background, such as a distant hillside or rolling pasture, would have made them stand out clearly enough at any distance.

Price Hires a Model

FRANK KING

A FINAL oily daub of rich orange, and Price laid aside his brush with a mighty sigh of accomplishment. Then he leaned back in the only chair in the studio that was not mortgaged to the very depths of its sawdust interior. As for the chair, Price could have told you to this very day the name of the customer that had given it to him in payment of two dozen eight by tens—negative highly retouched. Price had expected to get $35.00 for them at the very least, but . . .

Picking up the sign, the photographer held it at arm's length. It had been made with pink oilcolors, shaded rich orange, and painted on the greenish background pertinent to blueprint-paper. The sign was small and contained but few words. It read:—

FEMININE MODEL WANTED.
APPLY STUDIO WITHIN.
WM. H. PRICE, photographer.

Price scrutinized the sign with a feeling of satisfaction. Although it might appear a trifle gaudy to persons of moderate taste, he felt that no one could be excused from ignoring it after once coming within its range. The photographer glanced at his watch; nine o'clock, about the time that models usually go out for breakfast. Thrusting the time-piece out of sight, he disappeared into the darkroom. Returning almost immediately with four push-pins, he descended the stairs to the sidewalk-entrance and fastened the sign carefully to the door. This done, he ascended to the studio and moving a chair nearer the studio-window, took up a watch there. From his place of concealment Price could see all comers and goers; therefore, if a prospective model stopped through behest of the sign, he could have formed an estimate of her qualifications even before she presented herself to him.

While Price had carried out all this outwardly composed, his mind was somewhat perturbed as to the outcome of the scheme. Settling in his chair, he thought it over pro and con.

While his ordinary customers, no doubt, would suffer from neglect, it was the slack season and he could better afford to make the experiment now than at any other time of the year. Models, he had heard, were expensive things and hard to procure in the theatrical season. On the other hand, he knew for a positive certainty that good prices were paid for well-tinted pictures suitable for magazine-covers. All foolish modesty aside, Price felt himself one of the best hands with the air-brush that he had ever seen—as his display-case testified. Fifty dollars was considered cheap for a good cover, and with the different poses all thought out in advance, as they were in his mind, he felt that he could make his time unduly efficient. All expenses totaled,

he felt he should make a net profit of from $50.00 to $75.00 per hour.

To insure against interruptions, he had typewritten a notice to read:—

TO-DAY IS MY SUNDAY.
CALL TO-MORROW.
WM. H. PRICE, photographer.

This was to be hung up when the proper model should have been selected. Fishing the slip out of a vest-pocket, he conned the contents with a resentful scowl. He had been but a year in the business, and overhead-expenses were high with profitable customers as wary of giving their physiognomy over to his tender ministrations as to Indians on the war-path. His two electric studio-lamps (rented) were as costly as a débutante's limousine. In his twelve months of business, he had sold but four dozen eleven by fourteens. One dozen of these still remained unpaid for, thereby wiping out the profits on the other three dozen. An installment was due in ten days. He knew no rich uncles that would conveniently die and leave him a million or two. He had several relatives, though, not averse to borrowing his last five-spot. So, Price felt that any promising venture tangent to his regular line was permissible in the hope to lift him out of the rut, however vague the form such a venture might assume. He slipped the notice out of sight and turned again to a scrutiny of passers-by. The experiment *must* go on!

In contemplation of the busy city-street, he forgot his misery and cares. A portly individual across the street was winding up his automobile quite industriously. The photographer thanked his spherical aberration that his cares were not encumbered with any such mechanical clap-trap as an auto. Although it would have proved a too-strenuous existence for himself, he felt that it was a godsend to his neighbor. In the last five weeks, Price had noticed his portly friend decrease several inches in girth. Presently the engine, consenting to unwind its pent-up energy, tore loose like a twelve-cylinder Packard. Diagonal to the machine was a meek-looking bay mare harnessed to a drygoods-wagon. The horse had once made a name for herself on the track and she must have taken the first discharge of the engine for the starter's pistol. She was off before the same cylinder had collected combustion again, and simultaneous with her start she took the inside track and pulled over the town-pump, to which she was hitched, scattered far and wide lingerie and other scanty articles of dishabille, made the corner and was around before Price could make up his mind what odds to give. He permitted a grin of appreciation to overspread his goodlooking features and burst out laughing, when a bewildered cat, scared into wild-eyed terror, climbed up the back of an Italian street-vender. Gasping for breath through the fast-moving panorama of events, he sank into his chair. As he did so, he faced the doorway.

When he had been examined for the draft, the doctor told him that he had a heart as tough as that of a Texas steer, and now Price felt as if he needed the sustaining strength of every tough fibre of it, to counteract the physical reaction of striking a calm in the midst of a gale of laughter. Framed in the doorway was an effeminate bundle of petite loveliness the like of which he would have before asserted existed only in dreams and yellow-backed novels. The photographer could think of nothing beautiful enough in the dictionary fitly to describe her loveliness. Outside of this, Price was prolific with words with which to deify her. Her hair was barely visible under a war-bonnet of a prevailing mode. The bit that was exposed reminded him of the boyhood color of the hands he was wont to expose proudly the day after a walnut-expedition. Her lips were a red Cupid's bow, and the photographer thought of rouge for an instant, only to feel reproached when he caught a glimpse of two large, lustrous, dark-sepia orbs looking accusingly at him. A rose gleamed in each cheek as if just blown from young buds by fresh morning-ozone. Just before he pinched himself to make sure of his wakefulness, he noted the slender lines of her figure and the orderliness with which her costume clung about her form.

Still thinking of the injustice in applying cosmetic thoughts to such lips as hers the photographer arose, stammering as he did so.

"I beg your pardon!" he stuttered.

Dear reader, with your kind permission we will here place a hand over the lens and grind forward a few feet of blank film. The next quarter-hour left a very faint and unprintable image on the conversational mind of the operator. He did have a hazy recollection of her declaration that she was a model—that he had said "uh-huh!"—and that he had also swallowed in one nmmurmuring gulp the announcement that she charged ten dollars per hour, even in the face of the fact that the usual price was three dollars. It may have been that she suited, or it may have been that peculiarly



"WHERE THE WILD FERNS GROW"
WILLIAM S. DAVIS

engaging smile she had. . . . It doesn't matter which it was; he had engaged her.

II

While the newly hired model undertook to make up in a Gypsy costume, Price went automatically about preparations in the darkroom. He poured into a graduate eight ounces of water and into this one ounce of pyro stock-solution. This mixture he poured into a tray. From a can he procured a handful of marbles which he dropped into the stock-bottle until the solution was once more even with the cork—to prevent oxidation. Into the graduate he poured one ounce of soda stock-solution to be added later to the pyro. From a jug, on a shelf above his head, he filled the hypo-tray. Moving over to the trimming-board, he cut several dozen $6\frac{1}{2}$ x $8\frac{1}{2}$ sheets of portrait-film and placed them in a cardboard carton for handy use. The photographer had enough plateholders filled to last until noon and, while the girl was out to luncheon, he counted on re-filling them. In this way, he could get a good start in the afternoon.

Coming out into the studio proper, Price began to arrange reflector and background. He didn't waste much time in the selection of the background—an almost pure-white one was the final choice. The uninitiated might have wondered why he selected such a glaring, ungraded white. To the man on the job no other could possibly suit. The background, if white, could in the print be tinted any color; but if gray or black, such would not be the case. He knew, too, that colored portraits showed up better with a white backing. Then, a white background would allow better vignettes to be made. In the arrangement of the two lamps, Price strove to heighten the idea of a light background. One lamp he brought forward until it stood near his camera and away from the sitter's chair (not yet occupied). This he calculated to furnish a secondary lighting—detail in the shadows—and to keep the background from falling in shadow. The other lamp he placed closer, his idea being to get the modeling with it. Any special effects he might wish to obtain for any one magazine, he felt able to produce by tints later on.

Everything arranged to his satisfaction, the photographer sat down to wait on his model. After a five-minute siesta, with his model still showing no indications of appearing, Price went again into the darkroom to make certain that all was in readiness there. Such proved the case. Nothing else to do, he began an inventory of his stock. Where the deuce was that half-pound of Metol? Oh, yes! He had taken it into the dressing-room to scratch "METOL" on the label with the seissors. The label was a blank one and Price felt that it should be tagged with a name, to identify the contents. He had forgotten to bring back the bottle, he remembered. He must get it as soon as possible.

Hearing a noise in the studio, he emerged from the darkroom. The girl was just entering from the dressing-room.

With a keen survey, which he tried to make strictly professional and impersonal, but did not succeed entirely in doing, he took in point after point of her garb. With approbation he noted how well she had followed his suggestions. All cloth was white or a tint that would photograph either white or intermediate. She had even chosen the blue beads at his behest, in preference to the red. The only black about the costume was in the kerchief-cap, a headpiece of black and white squares. This he felt would furnish a needed contrast to the other tones of her costume, so even. No rouge showed on cheek or lip and her eyebrows were not penciled. These he would color, if necessary, in the finished print. The only regret he felt through his survey, was her hair. It would photograph too black to suit some of his poses. If it had been lighter, it would have made a more mobile tone to color in the print. She had powdered her hair considerably, as he had requested, but such a method he felt to be a "patch-job" at best.

The girl fingered two of his cravat-clamps that hung in her ears and pinched her eyebrows together undetermined whether to frown or smile ruefully. She decided on the latter, at the same time saying:

"Your tie-clamps make beautiful ear-rings; but they *hurt!*"

"'Spect you better leave them off, then," Price advised. "I can paint them in later." He didn't take time to explain his meaning to her, but continued: "In fact, come to think of it, I would *rather* you omit them! As for the rest of your make-up, it is O. K."

As the model took off the clamps, Price looked at his watch. Twenty iron men had already rolled themselves beyond his grasp and still nothing to show for them. Hiding his watch, the photographer drew up a chair and motioned her into a pose. Despite her declaration that she had posed before, Price was taking no chances of having a bad pose through an uncomfortable tension in the air, so he began a conversation.

"Did you notice a bottle of shiny, powder-like crystals in the dressing-room?" he asked.



AWAY FROM COLLEGE-HALLS C. VERNE KLINTWORTH

"Y-yes, I did." The model looked up quickly: "I had some trouble getting on my slippers, they are rather tight, and I used some powder out of a bottle setting on the dresser, to make them slip on easier. It didn't look much like talcum, but it did very nicely." After a pause, she added: "It wasn't particularly valuable, was it?"

Acting is a remarkable thing and a great accomplishment: we all have it in a greater or less degree. Price had it in a "greater" degree. With her announcement, the inside of the photographer became as a seething volcano; but he presented to her an exterior as cool and unruffled as a lake at twilight. And it is no wonder that his insides seethed. Metol costing—well, it was virtually unpurchasable! And to have an expensive toy deliberately throw—Jove only knew how much of it—to the wanton winds. It came within a hair of being too much!

"No!" he shouted hoarsely, in answer to her question, and turned toward his camera.

As he did so, the photographer faced the reception-room door. It stood ajar. And no wonder! The room was so completely filled with customers that, were not the door open as an outlet, the walls would have burst outward from sheer incapacity to encompass its contents—people. The photographer had been so absorbed that his perceptions had become slightly dulled. Therefore, he had not heard their miscellaneous entrances. It was a cosmopolitan assembly. In the far corner sat a matronly figure surrounded by six youngsters of varying degrees of height, concavity, rotundity and inclinations. Each youngster had two hands filled with his (Price's) possessions; albums, dried and drying prints (the photographer thought of died and dying), framed photographs, miscellaneous. There were two Italian soldiers with several of their friends come to see them off with a celebration before the camera. A senator was there, two policemen with a rogues-gallery victim, and a sprawled-out figure that Price tabbed as a brewery-truck driver in his best—or worst. It was quite apparent that Price had neglected to tack up his sign, "To-day is my Sunday."

Price would have ejected the entire collection, if it had not been for the truck-driver; the photographer did not like to soil his hands on such low-brow stuff. So he sent the girl into the dressing-room and turned the six wild, young things loose in his studio.

Price was about as long in getting rid of his roomful as a six-inch pipe would be in discharging a hundred-barrel cistern with a twelve-inch inflow. The longer they came, the fuller it (and they) got. A soldier would go out only to leave three U. S. Marines in his place. A photographer can do much when pushed for

time—even press the bulb without pulling the slide—that is, if he doesn't have six destructive young mammals that refuse to be satisfied until they had seen the birdie, five foreigners eleven-tenths bibulous, or a young giant whose after-vengeance was much to be feared. It only prolongs the agony to tell about it. Let it be sufficient to say that, when the room was finally cleared, it lacked but one minute of noon.

The girl came from the dressing-room dressed for the street.

"Where shall we go for lunch?" she asked.

Price was bewildered, flabbergasted, knocked silly. "We . . . ah we! Yes, to be sure," he stuttered. "Where *shall we* go for lunch?"

"Shall we try Sherry?" she suggested quite naturally.

"Sure!" he played safe. He did not know whether she meant a beverage or a restaurant.

When they left the studio, Price tore down one sign, threw it into the gutter and hung up another in its place. His mind was somewhat clouded, but he hoped very clearly one thing—that Sherry was a place where to eat.

. . . . . .

III

Back in the studio once more, Price marshaled his thought-forces, while his model for the second time made up as a Gypsy. His venture, thus far, was proving slightly more expensive than he had anticipated and he felt that a thought-fest was in order. The meal at Sherry's (it proved a table-d'hôte restaurant) had set him back $13.89; pay for the model for the morning added $30.00 to this—$40.00 if she charged for dinner-hour (she did)—afternoon-trade turned away, added $10.00 more, and in addition two shoes filled with Metol wasted. All this expense *without one exposure*. "I'd like to shake hands with the guy who said, 'sweet are the uses of adversity,'" Price murmured. "He must have been a sarcastic beggar!" To interrupt his thoughts, came a Gypsy girl and the photographer cleared his head and got down to business.

It happens, usually, that the calm follows the storm; but in the case of Price the axiom was reversed. In comparison to the morning-calm, Price proved a veritable hurricane, for he performed more work that afternoon than three ordinary studio-experts. His mind seemed hypo-cleared and thought out fresh attitudes and cunning poses for his model to interpret for him. His holders were all filled and so the slaughter went on with lightening rapidity. An actress-friend had recently given him a carload of costumes. Price had, therefore, an ideal wardrobe for his present undertaking. Then too, his model proved very versatile in her interpretations. The studio-lamps seemed to jump almost unaided to their positions and, for once in their contrasty existence, overpaid their keep.

Most of the exposures were taken to hit the public, irrespective of artistic merit. First of all, the negative must yield a print that would color well, and so each film was given full, but not too great, exposure. Each picture represented a type—that is, a bold outline that would show up on a magazine-cover. Therefore, most of the views were profile. One type that he thought would make a good seller was one wherein masses of curls fell downward like water over Niagara. Another was the girl-athlete, a branch of magazine-illustration that had many by-paths, embracing all the different forms of sport. These would go to outing-magazines. Others were the country-miss, the city-miss, modern girl, Greek type, and numerous profile views expressing no particular thought except beautiful girl. These latter would go to fashion- and society-magazines.

IV

When unlucky events occur, they come in triplets or greater numbers, which is preliminary to saying that a multitude of jinxes jumped on the photographer's shoulders the next day. The first one jumped when Price opened the holders that he was so positive were filled. He found all, save one, as empty as words in a deaf-and-dumb asylum. The second jinx jumped when he went into the dressing-room to get his Metol; it was gone. Gone also were his two tie-clamps, a diamond stick-pin that he had carelessly left on a chiffonnier, and several silk-dresses. The climax of all came when he found the films from the holders neatly piled in the bottom-drawer of the dresser. How she came to miss the one holder, he never knew. It ever remained a mystery how she got the stuff past him without chloroform; perhaps he had been hypnotized.

Soon afterwards, he counted up his losses and discovered them to total as follows—one-half pound of Metol, $25.00; eight hours of posing, $80.00; four silk-dresses, $175.00; two tie-clamps, $8.00; one tie-pin, $35.00; trade lost by not pulling slide, and otherwise, $15.00; luncheon for two, $13.89; overhead, $5.00—total $356.89! *If* he could sell for $50.00 the one picture he obtained of her, that would still make a net loss of $306.89.

As Price left the studio to go to luncheon, he met "Rube" Crosby, gumshoer, a very close friend of his and one who brought him in considerable rogues-gallery business. The de-



"WE ARE READY NOW!"
F. J. MORTIMER, F.R.P.S.

tective ate at the same "quick lunch" as Price, so they walked on together. Over coffee and doughnuts, Price poured forth his tale of woe to the detective. As the tale progressed, Crosby became more and more interested and, at its end, lost in thought. Finally he spoke.

"I should like to see that one picture you got!" he said.

V

Thirty minutes later, in the studio, Price handed the detective a print still damp from the hypo. Crosby looked long and earnestly at the print and then cleared his throat.

"Price!" he said. "It is just as I thought. You have here the only known picture in existence of this girl. Her right name is Mary Fairfax—she has a million aliases—but the name by which she is most familiarly known is 'Little Mary.' She is wanted in several states for grand larceny; in this state most of all. No one has been able, so far, to place her in custody, chiefly because we minions of the law have been hampered through lack of a picture which we could send throughout the country. There is a reward of $1,000.00 for her capture; or for a picture alone with likeness enough to identify her there is a reward of $500.00! *This photograph certainly fills the bill!*"

Crosby told the force afterwards that he never had such a time to revive a man.

Pictorial Photography as I See It

In Three Parts—Part II

C. W. CHRISTIANSEN

CONSTRUCTING a picture is simply a matter of covering a given space, size being immaterial. A painter chooses the dimensions of his canvas, so you choose your plate or enlargement. Either way, it is just a space to be filled with interesting material, so placed as to be decorative and pleasing to the eye. No part of this space should be entirely blank—a bald-headed sky, for instance. The seemingly vast empty space seen in so many photographs is absolutely bad. Why? Well, one reason is that the times that one sees the heavens completely free of at least the suggestion of clouds, —even on our brightest days—are so infrequent that we can readily believe that there is no such thing as a cloud. The other reason is that paper itself does not represent sky-quality, even the cloudless sky-phenomenon. For these reasons, use a ray-filter, not too deep. A three-time screen does very well for ordinary subjects, but take care not to develop the plate too hard.

For guidance in composition, I will refer you to a diagram. Although an old guide, it has proved itself so simple and useful to me, it may be worthy your attention. Size of your plate does not matter, be it vertical or otherwise, so long as you remember the proportions. Notice the four lines and bear in mind that the strong points of your composition are where these lines cross. The weakest point is the center, where the main object should never be placed. The two lower cross-lines are the strongest points, except where overhanging branches for a decorative effect are used and the main object must needs be placed near the top of the picture; then the two upper crossings become the strong points. It would be well to so line your ground-glass and get these rules fixed firmly in your mind, so that in composing you will unconsciously build your composition artistically.

Searching for pictorial material is an ideal way to get acquainted with nature. It is a clean healthful exercise which may be made just as strenuous as you wish. The heart of the true pictorialist thrills with pleasure at the thought of a promising theme, and hardships and discomforts are forgotten in his eagerness to catch the story unfolded before him and make it his possession forever in the form of a finished print. Your motive, story, purpose, or what you will, woven with threads of originality, guided by intuition or an appreciative sense of what is decorative becomes a material memory for you to cherish or pass on. It sometimes happens that after the negative and proof are finished, by careful study you may see the need of a change and the finished print may be entirely different from the original conception or plan. Possibly but a small part of the original negative will be used. I have made 11 x 14 negatives from parts of a 4 x 5, several times, and even then trimmed them down to one half or less. This, I believe to be always justifiable if a more pleasing re-



PIONEERS C. W. CHRISTIANSEN

sult can be obtained. However, this is not highly recommended; for by the time you are ready to make the enlargement, you should have determined just what part of the negative is wanted. Try to train yourself to have a definite idea in view. Do not be that kind of worker who, strolling about, suddenly says: "My, that looks pretty; guess I'll take that!" usually winding up by throwing the result into the ash-barrel. Remember that a good marksman aims before he pulls the trigger; result—a bull's-eye. So with you; make the pushing of the button register a hit.

Light-and-shade effects require constant study and careful consideration at all times. Light-and-shade is the life of your print, and with proper handling gives character to your subject. Through its influence you are first attracted and through the identical means is attention drawn to your finished work. An understanding of its importance is the key that unlocks the door to pictorialism and enables you to really see.

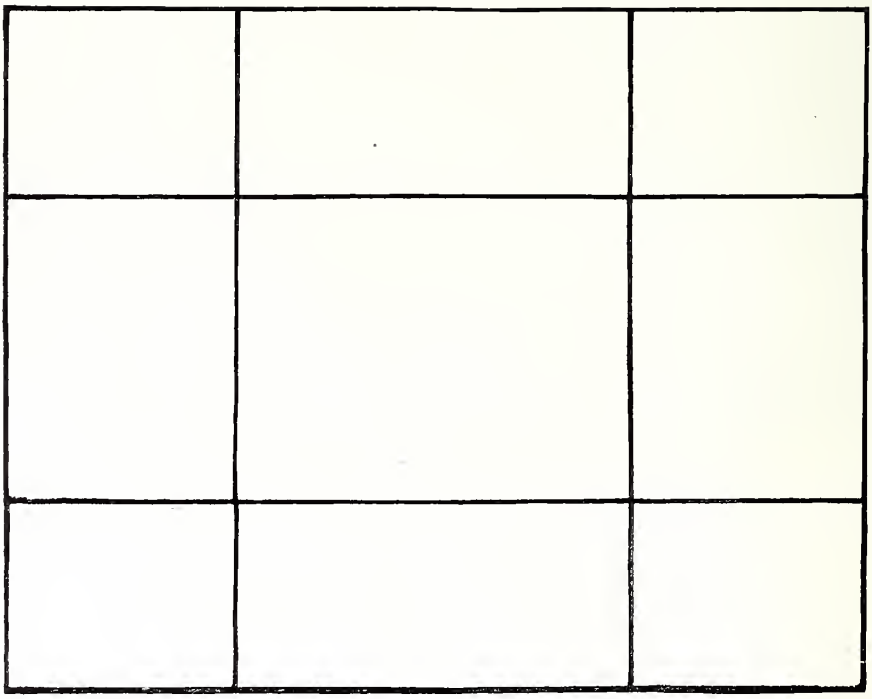
A little lesson in light-and-shade effects may be taught by means of the illustration, "Pioneers," which has for its motive a pair of oxen. "Pioneers" may not be considered strictly pictorial material by certain workers who maintain that animals are outside the realm of pictorialism. This sentiment is the outgrowth of numerous amusing pictures of cats and dogs; and I agree thoroughly that "Trixie" or "Lord Windmore," although "perfect darlings," do not always furnish the best means to attain our pictorial goal. However, if one sees a story,—ah! there's the point, a story. Let me tell you my story or just what I saw in these stupid, patient oxen with their great hidden strength. They brought to my mind the West, our West when it was struggling through untold privations and hardships. What does Kansas, Nebraska and the many other states not owe to these faithful workers who, with those brave men and women of the prairie-schooner days, set out to make their fortunes? For conquer they did, and we might now run across them as they ride in their automobiles and relate with pride stories of the days when they pioneered with the oxen and made possible that fair land. "Out where the skies are

a trifle bluer; out where the friendship's a trifle truer—that's where the West begins." Our story is also helped along by the man and the tent, and we could go on and on whither our imagination leads us; but we want to talk of light and shade, so your attention is drawn to the play of sunlight on the animals, which gives life to an otherwise dull and uninteresting scene. Note the short shadows cast by the oxen. Does not the light seem to fairly shimmer in the intense heat of the noonday-sun? By the placement, as well as by the light-effect, the animals are of first importance. Thus we see that by placing our main object in strong light against a dark mass, we gain in contrast and striking effects. Then, too, do not be afraid to get up close to your subjects in handling material of this kind. Tell your story boldly and receive the reward of a strong, impressive, and convincing character-study.

"Italian Garden" is a composition where vertical lines predominate. Our concentrated light on the main object and its position against the darkest part demonstrate again our light-and-shade values. The motive is so obvious in this instance that it scarcely needs explanation. Motherhood! That immortal subject which brings forth the tenderest and noblest of all sentiments. Anyone fortunate enough to have seen the Fine Arts Building at the Fair in San Francisco, will agree with me when I say that few indeed are the works of art more beautiful in conception. Columns, at all times, convey a feeling of loftiness of purpose; then, what more fitting background could the loftiest of all sentiments—motherhood—have than that?

Horizontal lines are useful to bind vertical lines together. Where the composition is made up of vertical lines, something is needed to give stability, to take away any feeling of insecurity. Note the small part of the statue's base. You will see there a horizontal line which gives firmness to the entire picture. Now if the base were entirely hidden by foliage, one might get the impression that the statue as well as the columns were about to sink and disappear, or that the whole structure might fall. The two horizontal lines, the one at the base of the statue and the larger one connecting the columns, are what bind our composition together and give stability.

With regard to landscape-work, let me impress upon you the great value of the early morning. Then it is that the shadows are long and full of



COMPOSITION-GUIDE C. W. CHRISTIANSEN



MORNING-SHADOWS

C. W. CHRISTIANSEN



ITALIAN GARDEN C. W. CHRISTIANSEN

strength and seem so much bolder, and wonderful effects may be had in masses. The evening-shadows seem to be softer, certain subtle qualities are about bestowing tranquillity and peace.

"Morning-Shadows" has for its motive the spirit of an early morning landscape—bold shadows and dew sparkling on the grass. The spirit that makes one feel like lifting his voice high in song, remembering the world only as a thing owned by him alone, a world made up at that moment of quaint noises of insects, and twittering morning-calls of birds, all bound up in that most wonderful thing—the breath of early morning. Morning-air could easily be called magic air. Surely, there is a magic something which enters your very soul, dispelling all doubts and fears and old-time prejudices and leaving in their places faith and strength and a peculiar warm-heartedness toward the entire world. For the tired body and the sick heart, try the greatest of tonics, an early morning tramp. You will acquire not only these marvelous benefits, but your print will record the memory. Summing up this print, four principal planes form the composition, the darkest ones predominating. The shadow in the foreground, being the darkest part of the print, aids in accentuating the various planes and assists in giving perspective and depth. The birch-tree furnishes height and breadth as well as a final resting-place for the eye. We notice also that the various planes are broken up by variety in spacing or by gradation in tone.

Are Lenses Fairly Marked?

R. CHILD BAYLEY

WHEN a photographer buys an expensive lens instead of a cheap one, the quality for which he pays the extra price is, in most cases, rapidity. A lens that will define at F/5.6 as well as another at F/16 is worth ten or twenty times as much; and in photographic lenses the one great direction in which improvement has taken place has been in aperture. It is therefore important to know that the marking on the diaphragm is correct; and that one is actually getting what one is paying for.

Some buyers take the rapidity on trust; but many others attempt to verify the maker's graduation, and not uncommonly find that, according to their own measurements, the maker has overstated the aperture. In a year we receive at least a dozen—possibly a score or more—complaints that a lens bought, say, to work at F/6.5, is actually not faster than F/7, if as fast: and when this is the outcome of the test, the photographer naturally thinks that he has been "done," and becomes wrathy.

To prevent any chance of misunderstanding, we will point out at once that we believe that such a practice as this suggests is not at all common, even with lenses bearing no responsible name: of course, those that have the marks of any of the celebrated manufacturers are beyond suspicion. But even with unnamed lenses, where if anywhere such a practice might be expected to show itself now and again, it cannot be common. We have tested, and have seen tested, a very great number of photographic lenses of all kinds and from many sources; and the instances in which their rapidity was grossly overstated have been extremely few. With at the most half a dozen exceptions, the difference between the real and the marked aperture has been quite trifling, and it has just as often been against the manufacturer as with him. In fact, if we might make a guess, we should say that, in the case of low-priced lenses, the maker settles on his type and his aperture, makes and graduates his iris diaphragms all alike, and then grinds his glasses so that they average the required focus: and any variations from the markings are due to the inevitable slight variations in focus of the individual lenses. If commercial lenses generally are fairly graduated, someone will ask how is it that the buyer so often finds the F/ number of the aperture to be less than it is marked? An explanation may be of interest.

The explanation is that the rough and ready way of finding the F/ number, generally employed—although it is near enough in its results to determine exposure—is not reliable enough to be used to verify the marking on the stops. The photographer measures the focus of his lens with more or less accuracy, measures the diameter of the stop-opening, divides one by the other, and so gets the F/number. With all the ordinary forms of photographic lens, almost without exception, the "effective aperture" of the stop is larger than the actual opening; and that being the case, since it is the effective aperture which determines the F/ number, the rough and ready way makes the F/ number too high; that is to say, it makes out that the lens is slower than it really is. If we are to test the accuracy of the maker's markings to any purpose, we must be careful both to ascertain the *effective* aperture of each diaphragm opening, and also to measure the focus accurately.

The usual way to find the effective aperture is to focus the lens for infinity, and then to replace the focusing-screen by an opaque card with a small hole in the center of it. The camera is taken into the darkroom, a circle of bromide paper is placed upon the front of the lens and protected from light with the lens-cap or in some similar way. Then, the stop to be measured being put in the lens, or the iris set, a candle is held for a few moments just outside the hole in the card. On developing the bromide paper it will be found to bear a circular black patch, which will usually be a little larger than the actual opening in the stop, and represents the effective aperture. If we wish to do so, we can make a series of such exposures, and in this way get a record of each of the stops in current use.

The diameter of the black patch is the dimension we require, and we must divide the focal length by it to obtain the F/ number; but to do so accurately enough for our present purpose, we must know the precise focus.

It is not sufficient to focus some distant object, and then to measure from the ground-glass to the diaphragm, as is sometimes done. This may be near enough to satisfy the requirements of exposure problems, although it is a little rough and ready even for that purpose. The various types differ very greatly in the position of the nodal point, which is that to which the measurement has to be made, relatively to the stop.—*Photography.*



"WHERE COWSLIPS BLOOM" BERTRAN F. HAWLEY

Better Pictures for the Nature-Lover

BERTRAN F. HAWLEY

THERE are few pleasures that can mean more to those who truly love Nature than the hours that they may be able to spend with a good camera in the great outdoors. We may think that we fully appreciate the beauties of some favorite retreat; but until our artist's soul is in some way awakened, Nature will not unfold herself to us in all her many moods. Photography has already helped to bring the love and understanding of art to many; and it does very much more—it opens a way to those of us, who, otherwise, would have to be content with very little artistic education.

With the thought that, perhaps, some fellow-worker may be helped thereby, the writer will endeavor to give—as they have come to him—a few suggestions towards the making of better pictures. There are many good books on the subject, and much appears in the photo-monthlies, from time to time; but the camerist who is trying—more or less alone—to break away from the usual snapshot, may not have access to these books or magazine-files. If he should find it all an old story, let him pass it by; but if he is helped thereby, it is worth the writing.

The first step to make better pictures is to grasp the fact that, whatever the subject, it is represented in the finished print by masses of different tone, more or less defined by lines. If these do not bear a pleasing relationship one to another, as well as to the whole, the picture is not pleasing to the eye. Perhaps, it is not restful; and, as we look at it, we wander from one object to another. There should be but one principal point of interest, to which all others are subordinate. It might be said that the skill of an artist could be judged safely by his ability to

manage these subordinate interests. For instead of detracting from, we should aim to make each in some way lead up to, or strengthen, the key-note—as it were—of our composition. Often, we see material for two or more pictures all crowded into one. A safe rule to follow—once we have chosen the theme of our picture—is to omit everything that cannot be made a pleasing accessory. Again, it is so easy to allow the lines of our roadway or brook to take us quickly right out of the picture. See to it that no principal lines lead to the margins, but away from them; and in such a way, that the eye is drawn pleasingly to the one source of greatest attraction.



THE BIRCHES — BERTRAN F. HAWLEY

As you study your ground-glass, try to think how the finished print will appear; and follow the leading lines. If your eye is not satisfied to rest within the picture-space, you may be sure that something is wrong. Try another view-point. Do not expose a plate on some pretty scene as you come upon it; but first study it carefully and from every direction. There may be two good view-points; but there is always one that is best.

At the same time that we try to look after our lines and masses, care should be taken with the tonal composition. Our picture that was so pretty in color may have very different values in monochrome. Especially is this true, unless we use some means for color-correction. As we compose our lines to appear pleasing, we must think, at the same time, what tone-values the various masses will have in the finished print. In most compositions, the lightest tones will have the stronger attraction. Therefore, as you place them, be careful that they are not in contradiction to where the lines lead the eye. Usually, we choose a place well within the picture-space; but never in the center. It is necessary to have different tones to make a picture; and its strength depends upon how those tones are placed and used to the best advantage.

These two fundamental principles in composition are the foundation of all further advancement. If serious thought and a reasonable amount of practical study is given to composing negatives carefully, sooner or later we find ourselves making the most of every picture instinctively—without really thinking of lines and masses, or light and shade. When we reach that stage, we resemble the pupil who has learned the notes of his instrument perfectly, and can now give his best to future study, to perfection in technique, and to that which is the soul of it

all—expression. For, as we look at some masterpiece, it is not the faultless composition or wonderful technique that thrills us, but rather, the story told, or voice of Nature that almost speaks to us from woods or hills.

Let us take a few of the principal kinds of outdoor subjects that the average camerist could find to picture and try to suggest a few ideas from an artistic point of view. Nature appeals to each of us in different ways; therefore, our efforts will not bring similar results. But I hope to make clear some rules that may be helpful to others—even though they may follow them out more in harmony with their own particular ideas.

To show one way to obtain the most that there is in a picture of some favorite scene, let us take as our first study the natural material which we have in "The Beaver-Meadow." Here we find as the main interest the flooded meadowland. Had we included more of it by a close-up view-point, it would have fallen far short of its strength and beauty as here shown; and possibly it might not even have suggested its true character. By carefully choosing a more distant view-point, the surroundings—instead of detracting—add to making the beaver-pond the theme of our composition. A large part of its beauty lies in the way it is set in the surrounding hills; and the foreground gives more definitely the character of those hills. Especially the dead poplars at the left speak of the north-country. The dense mass of bush in shadow at the right plays an important part; for being the deepest tone in the picture, it helps to give a greater feeling of distance, and better perspective. It is balanced nicely by the lower shrubbery at the left, from which stand up the bare poplars, and these skeleton-trees are held more closely into the picture by the one that is leaning. A little to the left in the foreground, the roadway enters abruptly, thus taking us quickly into the heart of the picture—the gracefully placid waters, which lead us still farther into the distance and the woods beyond.

Notice the strength of the one point—the narrow beaver-lake as it enters the distant forest. No matter where the eye first rests upon the picture, it is invariably attracted there. And how pleasingly satisfying it is, to linger awhile before we wander on into the still more distant hills. Whatever the landscape, we should always try to have one point of strongest interest to which all others lead; and, if possible, that interest should not end abruptly, but incite the imagination to take us still deeper into the picture and distant scenes.

A scene of this nature always speaks of quietude and peace. Therefore, if possible, choose a fitting day to try to interpret it with your camera. Such a day comes often in the summer-season—when the blue sky is screened with those gray-white clouds that come lazily drifting by; and ever and anon the sunshine floods the scene. This is the ideal picture-weather; let us make the most of each such day this year.

Scenes of the beauties of Nature—or at least many of them—can be managed successfully along some such lines as I have tried to suggest. But wherever we find beautiful lakes and running waters, wooded hills or more open meadows, there—and almost everywhere—are many little pictures. Perhaps some pretty group of birches on the shore of a quiet bay will appeal to us most strongly; and it may be a winding roadway, or a quiet woodland-path. There are many and varied little nooks and corners, well worth the careful study necessary to obtain a pleasing composition. And thus made seriously, many of them will compare very favorably with prints of more imposing scenes.

In the making of them, simplicity or singleness of purpose seems to be the key-note of success. Therefore, do not include too much. Just a single group of trees will usually be more successful than a greater number; and if you are making the trees of chief interest, be careful that the surroundings do not detract. As an illustration, "The Birches" is here given. It is a pleasing little composition, with the branches all leading into the picture, as they gracefully overhang the water. And just a faint glimpse of the boat-house arouses our interest to wander on down the shore.

In outdoor camera-study, the highest ideals we can have are the truthful rendering of Nature in her many moods. We go about it sometimes in opposite ways apparently; but successful efforts usually give very similar results. We may be impressed by a certain appeal some favorite woodland has for us, and we try to get that in our picture. Perhaps it is strongest when the lengthening shadows speak of departing day; then we spend what time we can late in the afternoons, exposing a plate or two carefully until we succeed in taking home with us a bit of that charm. Or, again, our minds may conceive a picture with some favorite mood we wish to put into it; and we go afield looking for material that will help us work out our theme.

In the spring and early summer it is natural that we choose for our pictorial theme something that suggests early summer; and we go out with the intention to make such a picture. Everywhere the flowers speak to us, but especially in the low places. There the luxuriant



BEAVER-MEADOW
BERTRAN F. HAWLEY



WATER-LILIES BERTRAN F. HAWLEY

masses of cowslips—like islands in the fresh marsh-green—seem to impress us with the very spirit of spring. We decide to make this our spring-study; and next we proceed to find how we can use the more general setting to the best advantage. As it happens to be more or less open woodland, it is necessary to include a few trees; and it is essential that they be an important accessory. Spring being always associated with the beginning of life, slender young trees are most appropriate for our purpose. Everywhere the cowslips are growing; and we soon find some broken thickets of young saplings. Then our natural material is complete.

An attractive grouping of the slender trees is found, with an opening leading into the middle distance. Since at this season of the year everything seems to be light spring-green, it is necessary to have something of stronger tone and interest to hold the eye sufficiently in our picture; and a little pool with its bank in shadow at the foot of the strongest tree-grouping answers this purpose. It is placed a little to one side of the picture-center. Keeping this in mind, the camera is moved about until the most pleasing arrangement of the cowslip-masses is found, to make up the principal part of the study. The result is shown in "Where Cowslips Bloom." As we look at this, the more or less broken foreground leads to the little pool, then into the suggested brighter opening beyond; and, from the wealth of soft detail everywhere, there seems to vibrate a fragrance of fresh opening buds.

The introduction of figures in landscape-work should afford to the serious worker one of the most lasting pleasures of his photographic effort. The memories associated with successful pictures of this nature very often make them of untold value in future years. Persons seem to predominate in nearly one hundred per cent of



SUMMER BERTRAN F. HAWLEY

the snapshot-pictures; but in artistic work comparatively few good compositions are seen.

Many times some scene we wish to portray may be improved by the addition of one or more figures. In this way we may give meaning to a picture, or express some sentiment. In work of this nature, success depends on the ability to choose the best place for our figures with regard to the composition. There must be perfect sympathy between the model and setting—the unity so necessary to a well-composed picture. As an illustration "Summer" may give some idea of the many pleasing studies along this line that can be made during the present season. Here is seen an average bit of woodland; and let us first picture it without the figure. The predominant interest being the heavy summer-woods, it, therefore, occupies the greater part of the picture-space, and is accented by many heavy vertical lines. To balance this properly, we add just sufficient open pathway to suggest the horizontal, which later is much strengthened by the sunlit shadows. The result is a pleasing composition, and very characteristic of the place and season. In short, true to the life.

The dense foliage and brilliant sunshine make this a summer-study. But how much more we put into it when we add the young girl with her arms filled with flowers. It is not now just an August woodland, for it brings to us thoughts of Nature at her best—and Life, and the fullness and riches thereof.

In connection with the use of figures in landscape-work, much could be written recommending more careful thought with regard to the great number of pictures made of *just people*. Generally, they are members of the camerist's own family, or friends. And how few such pictures we see that are not spoiled by the usual stiff and unnatural position, and by a "looking-at-the-camera" expression. The best pictures we could make of our friends would—if it were possible—be those made when they were not aware of our intention. But as this cannot be accomplished often we should try to make our subjects apparently unconscious of the camera.

In "Water-Lilies" we have an outdoor-study that should be within the limits of purely hand-camera work. As in most close-work with a relatively short-focus lens, there is considerable

distortion—noticeably of the canoe—but the arrangement is such that it does not appear too obtrusive. The distant trees are placed unfortunately in the composition of the setting; but being given simply as a figure-illustration this may be overlooked. The picture was made under usual snapshot-conditions, with focusing-scale and small view-finder—but how different is the result! Here we have no obvious posing. Instead, the picture brings to our mind just a summer-afternoon paddle, and a few lilies to bring home. Surely, nothing could be more natural; and, therefore, it becomes a beautiful souvenir to keep in after years. A posed picture may resemble our friends; but we love best to portray them showing more of their intimate character in their daily tasks and pleasures.

These are but a few suggestions as an aid to make the most of the camera, as we use it out-of-doors. If it is to keep merely a pleasant record of occasional trips afield, let those pictures do full justice to the beauties of each scene. But if the picture is prompted by the still deeper love of art in Nature, then we place before us an ideal that will help much to develop the very best in our lives. Surely, that is a study worth while; and, because of it, each hour that we spend in the open will have added charm.

Enter—Professor Pyro

(First of The "Professor Pyro" Talks)

MICHAEL GROSS

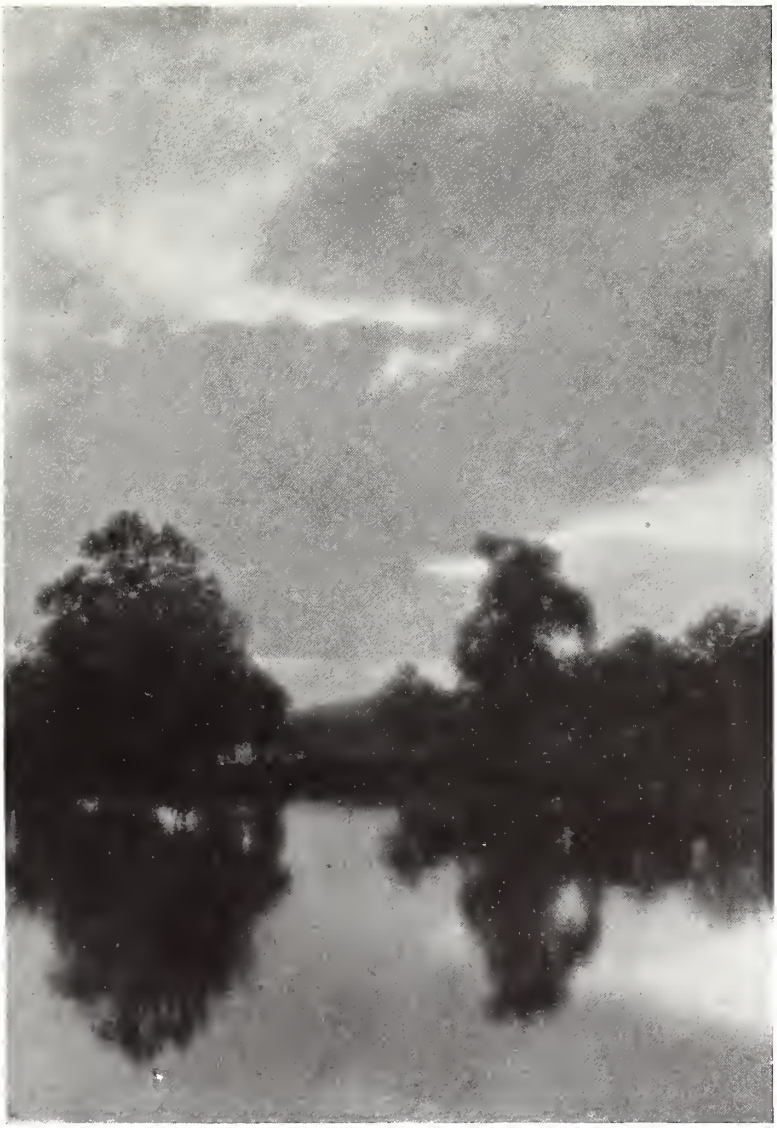
SOMEONE once asked the darkroom-manager of the Colten Photo-Studios why Mr. Colten, the proprietor, was known to his employees as "Professor Pyro." The answer he received, according to Dame Rumor, was: "See him for one minute, talk to him for five, and then try to find a name that will fit him better."

The darkroom-manager knew whereof he spoke. The minute allowed for ocular observation would have revealed Mr. Colten to the inquisitive stranger as a white-haired, ruddy-cheeked old gentleman, who was sixty-four years old but looked forty-five years young; a kind-hearted and generous employer with a stern voice belied by twinkling blue eyes and a broad, cheery smile; obviously a man of parts, to whom the title of "Professor" would naturally gravitate in the course of time, in much the same manner that certain individuals acquire the designation "Colonel" without ever having been near the scene of gunfire.

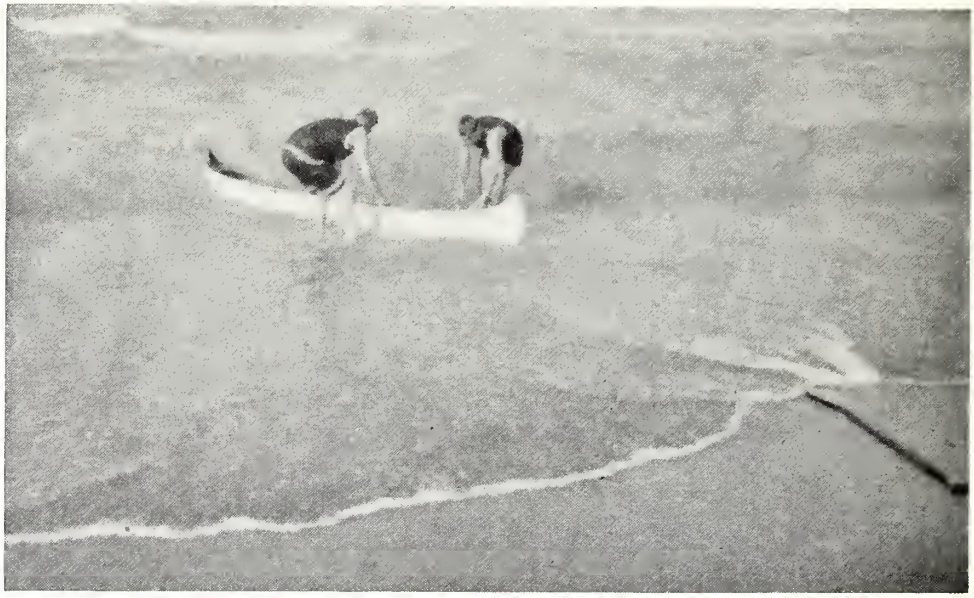
The first two minutes of the five allotted for conversation would also have shed an illuminating light on the wherefore of the "Pyro" part of the title. Professor Pyro, to sum the matter up in the succinct words of one of his office-boys, was a "crank" on photography. It was the subject nearest and dearest to his heart—a fact proved by his answer when asked why—in the forty-odd years that he had been a photographer—he had never taken a vacation. "There is no other place on earth," were his words on that occasion, "where I can have such a good time or make myself so much at home as right here in my own studio."

Not only did Professor Pyro know the practice of photography in all of its branches and ramifications, but he was also acquainted with the inside history of each phase of its development and the story connected with every improvement it had undergone since its inception. A chance question, put to several of the studio-boys a few days previous to the opening of this story, had shown Professor Pyro that there was a woeful lack of knowledge among many of his employees regarding the early days of photography and its discovery. No sooner was he made aware of this condition than he took steps to remedy it. A photographic class was formed, which was to meet every Saturday morning in the main studio and listen to an informal talk on photography given by Professor Pyro. In the Professor's opening address—according to the bulletin which announced the forming of the class—he would deal with the earliest days of photography, and in each succeeding talk would take up a further evolution of photo principles and processes.

The Colten Studio employees received the plan with enthusiasm, not only for the reason that the series of talks were to be held in the firm's time and that refreshments would be served after each one, but because they knew that Professor Pyro



A SUMMER-IDYLL
J. H. FIELD



CANOEING ON LAKE HURON PHILIP M. ARMSTRONG

had made a life-long study of matters photographic and that the information he would give them in these talks would prove of inestimable value to them in their daily work. Add to this their knowledge that Professor Pyro had a way of clothing the weightiest statement in a sugar-coating of humor which was irresistibly funny, and one can easily account for the fact that on the Saturday morning of the first meeting every employee was in his seat in the studio-room. Promptly at eleven o'clock Professor Pyro walked to the platform and, looking down on the smiling, eager faces upturned to his, began his talks on the history and evolution of photography.

"The bible does not mention the incident," Professor Pyro began, "but I have no doubt at all that Mother Eve, the first time she caught sight of her reflection in the limpid waters of the Garden of Eden lake, fervently wished that there were some way in which she could 'fix' the picture she saw, so that, when Father Adam's birthday arrived, she might make him a present of it. My reason for the surmise is that, being the first woman, she obviously invented the art of giving presents; and the likeness of herself, reflected in the waters of the lake, must have appealed to her as a gift which was sure to be appreciated.

"That this desire to catch and 'fix' the elusive image has occupied men's thoughts as far back as history can record is proved by the fact that, in the ruins of Nineveh, a city which was destroyed more than a thousand years before the birth of Christ, a glass-lens was found. This lens can now be seen in the British Museum and its existence tells us that even in those ancient days the manufacture and properties of simple lenses must have been understood.

"The next step along the road toward the evolution of photography came when Pliny, the Roman philosopher, who lived during the first century, noticed and recorded the fact that yellow wax was blackened by exposure to sunlight. However, like the boy who grabbed the handful of bees, Pliny did not know what to do with this discovery after he had it, and just let it go.

"Of course, it is not hard to understand that long before the actual discovery of photography the idea of likenesses being made by the action of the sun must have occurred to those who observed the shadows and reflections thrown by trees and other objects in broad daylight. As a matter of fact, it has been asserted that the jugglers of India knew of a secret process by which they could make pictures, using the light of the sun to obtain the image. However, it is evident that only the male members of the tribe were allowed to practice this process, for the secret was so well kept that no one to this day has ever been able to even verify its existence. The ancient alchemists, too, are said to



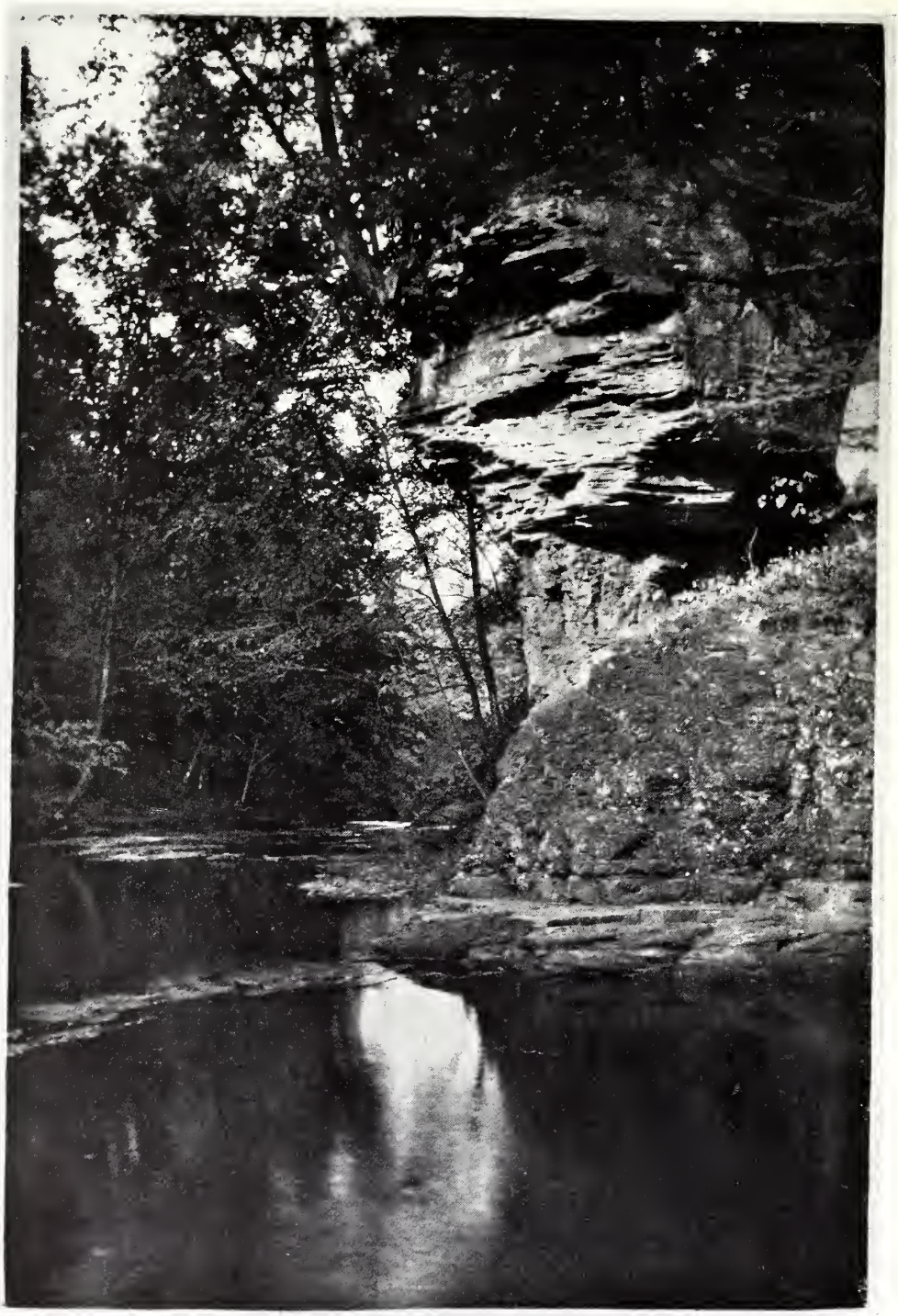
"IS IT ALIVE?" J. H. SAUNDERS

have discovered a chemical process by which sunlight-impressions were caught and recorded on sheets of glass; but verification of these facts also has never been furnished.

"The first tangible photographic item of importance which history records does not come until the sixteenth century. In the year 1565, Fabricius, a magic-worker, was trying to find a preparation by means of which he might be able to prolong human life—patent-medicines to cure any ill that mankind is heir to not yet having come into existence. Vexed at his repeated failures to obtain an elixir that would prove efficacious, he one day threw a handful of salt, with which he was experimenting, into a solution of nitrate of silver and thus obtained a precipitate of chloride of silver. On bringing this mixture out of the room with the intention of throwing it away, he was astonished to find that the sunlight soon turned the milk-white surface black. Thus, in looking for one thing, friend Fabricius found another, a familiar enough happening even to us twentieth century mortals when looking for anything but trouble, in the search of which later commodity we are rarely disappointed.

"His accidental discovery started Fabricius experimenting, but the old bugaboo of some way to 'fix' the image must have proved an insurmountable stumbling-block, for—outside of a brief mention in his book on metals, published in 1566, in which is recorded the fact that horn-silver turns black when exposed to sunlight—Fabricius does not seem to have made any further contribution to the evolution of photography. But that his findings were to prove of inestimable value in matters photographic we shall see as we go on.

"Let us now imagine almost a century of time to have passed, which brings us to the year 1650. The scene is Italy, and here we make the ac-



LOVELACE BROOK
GEORGE P. RUSSELL

quaintance of a young Neapolitan, with the many-syllabled, mouth-filling name of Giovanni Battista Della Porta. This Italian gentleman's claim to a niche in the photographic hall of fame lies in the fact that he was the discoverer of the camera obscura. Lest this ornate title bring to your mind visions of a glorified Graflex or other elaborate picture-making apparatus, let me hasten to say that Porta's discovery consisted merely of a light-tight, movable chamber, in one end of which a small hole had been bored and a lens inserted. The ray of light coming through this lens showed, on a whitened wall, an image of the exterior view.

"Nor was this device of projecting shadows through an opening and onto the wall of a chamber entirely new with Porta. The ancients, long before his day, had awed and mystified their congregations in the oracle temples with similar devices. However, by the addition of a lens, and by making his dark-chamber portable—no pun intended—Porta gave to the world an interesting and very useful improvement. That his discovery was fraught with suggestion is proved by the fact that, in later years, Fox Talbot, Niepce, Daguerre, and other bright luminaries of the early days of photography—about whom I will tell you more in my later talks—all used the camera obscura in their photo experiments.

"It might be mentioned, in passing, that Porta's only reward for his discovery was a beautifully engrossed note from the Ecclesiastical Church forbidding him to proceed further, as he was violating the laws of nature in thus producing artificial images. Before you laugh at this ruling, pause a moment and give thought to the fact that less than a hundred years ago the inventor of the locomotive—that iron-steed which has done so much to link the world together and bring the East to the West—was reviled and vilified because he said human beings might soon be able to travel at the rate of fourteen miles an hour by means of the new conveyance. The good people of his time contended that such utterances were in direct violation of the word of God, who, had He intended His people to travel at such an unheard-of rate of speed, would Himself have provided conveyances in which they could do so.

"Here let us pause a moment and see how far we have now advanced along the road of photographic accomplishment. We find that, with Porta's invention, we are now in possession of two vital elements or factors that go to make up the process of photography as we know it to-day. We have, first, the discovery of Fabricius regarding the action of sunlight on chloride of silver—which gives us the base upon which to form a photographic image. Then the discovery of the camera obscura, which enables us to concentrate or focus our image within a darkened chamber. And it is at this stage that the ancient hoodoo of how to 'fix' the image looms up, like Hamlet's ghost, to vex and perplex us. But even in this direction slow progress was already being made.

"In 1725 J. H. Schultze made copies of a written manuscript by placing the writing upon a surface coated with a mixture of salt and silver nitrate solution. The rays of the sun, passing through the paper which was translucent, blackened the surface underneath, except where it was protected by the opaque ink in which the words of the manuscript were written. By this process he succeeded in obtaining a white copy on a black surface. However, this impression darkened rapidly on being exposed to sunlight, and, as Schultze could find no way to make the image permanent, he went no further with his work.

"The fact that the sun continued its action on the sensitized surface, even after the desired image was fully printed, proved a great handicap until, in 1777, the Swedish chemist, Scheele, discovered that red light produced no chemical change on chloride of silver. This discovery made it possible to experiment on images produced by sunlight upon such a surface.

"Although it was Scheele who first found that a red light was a safe one by which to handle chloride of silver, it was not until a hundred years later, in 1844, to be exact, that Claudet, the owner of one of the only two photographic studios in London at that time, took out a patent for the use of red light in the darkroom.

"Two separate and distinct reasons kept Scheele from first obtaining this identical patent. One was that, in his day, there was no such thing as a photographer, and the other that, by the same token, there was also no such thing as a darkroom. Thus we see that it is not always the early bird who catches the worm. There is such a thing as getting up too early and finding that the worm has not as yet arrived to be caught.

"And now," said Professor Pyro, taking out his watch and glancing at it in evident surprise, "having taken you a little way along the great photographic highway, I will leave its further evolution for next Saturday's meeting. A vote will now be taken as to whether we shall all proceed into the library and partake of some refreshments or go back to our work. All in favor of the former will please raise their right hands and pass solemnly toward the library-door."

Needless to say, the refreshment-vote was unanimous and was passed promptly.

EDITORIAL

"We Are Ready Now!"

THE destruction of the Spanish fleet, in Manila Bay, 1898, by the American squadron commanded by Admiral Dewey, was preceded by the historically famous order signaled by the American commander to his junior officer: "You may fire when you are ready, Gridley." Destined to be equally memorable in naval annals, though indicating somewhat different conditions, is the reply: "We are ready now!" given by Commander Joseph K. Taussig, the senior officer of the first contingent of American destroyers—as it approached Queenstown—to the inquiry of the British admiral, Sir Lewis Bayly—"When will you be ready for service?" It is a fact that the American fleet was literally ready to face the enemy, for the commanding officer had lost no time to put things in shipshape on the way over. We are indebted to the rare artistic skill and personal enthusiasm of F. J. Mortimer, the distinguished English marine-photographer, for the privilege to reproduce and publish, in the current number of PHOTO-ERA, the stirring picture of a scene that illustrates the prompt and cheering response: "We are ready now!" Though a native and loyal Englishman, Mr. Mortimer is an ardent admirer of the American navy and, eager to be the first to portray with his magic camera the arrival in British waters of the American fleet, he had been lying in wait several days for the precious moment. How well he succeeded in accomplishing his admirable and self-appointed task, need not be told. The glimpse of the American destroyers ploughing their way through a choppy sea; the surging sea itself and, floating from the stern of a British craft in friendly salute, and dominating the picture with its protecting folds, the flag of freedom and democracy—the Stars and Stripes, from a picture that must stir the blood of every patriotic American.

Though criticism of Mr. Mortimer's picture will not be lacking, it should be remembered that to represent the American flag as flying from left to right, as is customary, may not have been possible in the circumstances. As for the manner of attaching the flag to the staff—although not in accord with the practice in the American and the British Naval Service—this is probably an artistic liberty on the part of Mr. Mortimer; for an artist is allowed more or less latitude (artistic license) in composing his picture. It may be that the flag was secured to the staff, in the manner shown in the photograph, to give it greater stability and to enable it to assume a position in the picture in accord with the artist's pictorial design, than might be the case were it attached to the halyard, hauled snug to the truck and allowed to swing absolutely clear, away from the staff. Mr. Mortimer may also have had in mind the resolute commander who lashes the flag to the mast so that, during the fight, it cannot be hauled down, but go down with the ship. No one will deny the grace and picturesqueness that the artist has expressed in his arrangement of this American flag. To quibble over so unimportant a detail, would seem like straining a point. And Mr. Mortimer's inspiring picture serves also to remind us of the important part played by the American navy in the present world-war—a part performed in a highly successful though unostentatious manner. It has conveyed safely a million of our men to France and has aided in destroying the dangerous activity of the German submarines. In the flush of our enthusiasm over the achievements of the American army on the western battle-front, let us not forget to give a share of the glory to the American navy. No higher tribute to the efficiency and courage of the American navy has been paid than that by Admiral Bayly, on the occasion of the first anniversary of the arrival of the American fleet in England, a copy of which has been courteously furnished the Editor by the Assistant Secretary of the U. S. Navy. It is as follows:

"Commander-in-Chief's office, Queenstown, 4th of May, 1918. 'On the anniversary of the arrival of the first United States' men-of-war at Queenstown, I wish to express my deep gratitude to the United States' officers and ratings for the skill, energy, and unfailing good nature which they have all consistently shown, and which qualities have so materially assisted the war by enabling the ships of the Allied Powers to cross the ocean in comparative freedom. To command you is an honour, to work with you is a pleasure, and to know you is to know the best traits of the Anglo-Saxon race.' Lewis Bayly, Admiral, Commander-in-Chief."

Is Photography a Luxury?

WITH the imposition of a tax on photographic material used chiefly by the amateur, a popular pastime will be seriously affected. In view of the valuable assistance the amateur photographer is rendering the Government, in war-work, it will be interesting to see to what extent he will be encouraged to continue his patriotic activities. How such a revenue-measure is received by the English photographic workers, may be seen from the following editorial in the *Amateur Photographer:*

"This is not such a simple and easy question to answer as seems apparent at first glance; and the new Budget, with its clause of luxury-taxation, is likely to have a peculiar interest for photographers. Will or will not photography be classed among the subjects liable to this new means of obtaining revenue? If an impartial survey is extended to the subject it will be seen at once what an integral part photography makes of the whole complex fabric of modern civilization. To the outsider, photography in many cases means little more than the amateur who owns a hand-camera and messes in a darkroom with chemicals; or the man who makes his livelihood by making the public's portraits; or as an interesting pictorial addition to our newspapers and magazines. But anyone with a wider and more intimate knowledge of this modern marvel knows what an important factor photography is in the system of a healthy, progressive nation. As a factor in commerce, it is recognized by all clever, energetic business men to be of very great value, indeed. Much of their advertising-matter is based upon its use; its scientific help is sought eagerly in their inventive plans and new constructive schemes; in ship-building and engineering, two of the most vital industries on which Great Britain is relying for victory, it is made use of in countless directions. As a means to spread news, impressively and vividly, it is pre-eminent: and the modern pictorial newspaper forms one of the most successful links to connect together the people of the nation in thought and action. While the written description is greatly influenced and colored by the writer's view-point, the photographic picture serves as an impartial and neutral recorder of events and happenings. This method to convey news and scenes in a realistic manner has been realized and appreciated by the War-Office of this country; hence the recent numerous exhibitions of war-photographs and motion-picture films all over the country, to impress upon us the progress and the tragedies of the war, and to open the eyes of the public to the sacrifices and efforts which will be necessary before a successful finish comes to the gigantic conflict. Then last, but in importance an easy first, comes its value as a factor in the military machine. The photographic sections of the Royal Flying Corps and the Royal Naval Air-Service, now amalgamated into the Royal Air-Force, have proved the unique and indispensable assistance of photography to the planning and mapping of a military action of any kind whatever. It is safe to assert that at no time in the whole of photography's evolution has so much depended upon the perfection of its development, skill and resource of its operators, as it has upon the successful accomplishment of the work of our aerial-photographers.

After these vital phases of photographic work, we come to the lesser but none the less essential branches,—namely, the portrait-work of the professional and the use of the camera as a recreation for busy civilian workers in war-time and other national vocations. There may be a more reasonable doubt whether the first is a luxury, pure and simple, or not. A few decades ago, when the portrait-photograph first came into vogue, no doubt it could be classed as a luxury; but within recent years its volume has so swelled and its influence so permeated human relationship, that its sentimental and personal value are unquestioned. What family in the whole of the belligerent countries is there that does not cherish some picture, crude or perfect, of its loved ones away fighting in the dreadful cauldron of bloodshed? It seems almost a sacrilege to impose taxation on this slender but powerful bond of affection between us; and we certainly do not think that photography of this kind deserves classification with such obvious objects of luxury as jewelry, fancy clothes, unnecessary ornaments, etc. Following close on this subject comes the second one of photography as a hobby. It has been suggested that this aspect may have to bear the brunt of this luxury-taxation, as far as photography is concerned; but even such a purely recreative form has claims to exemption much on the same lines as some of the other applications. The health-giving and beneficial effects of a hobby of this particular kind on the overworked and war-strained mind are beyond question. However, as tobacco, once considered a luxury, has taken such a hold on mankind as to be well-nigh a necessity, and has been taxed because of the pressure of national circumstances, it becomes a moot point whether recreative photography should be exempt in this respect. If the exigency of the situation demand it, and the authorities see fit to tax the cost of our materials, then we, as patriotic citizens, can hardly object to the payment of the tax, provided that all other hobbies, as well as photography, are forced to shoulder equally the burden. This last is a vital important point."

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, or artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Spirit of Spring Competition
Closed June 30, 1918

First Prize: Winn W. Davidson.
Second Prize: P. Boetel.
Third Prize: Louis F. Bucher.

Honorable Mention: Ross W. Baker, Mrs. Wilfred E. Clarke, Louis R. Dyar, E. M. Pratt, J. Herbert Saunders, W. Stelcik, S. J. Wigley.

Subjects for Competition — 1918

"Landscapes with Figures." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Flashlights." Closes December 31.

1919

"The Spirit of Christmas." Closes January 31.
"Still-Life." Closes February 28.
"The Spirit of Winter." Closes March 31.
"Rainy-Day Pictures." Closes April 30.
"Miscellaneous." Closes May 31.
"The Spirit of Spring." Closes June 30.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Hardening the Negative-Film

IT might be well to consider the valuable properties of formaline during the approaching warm weather. One of these is to prepare the surface of gelatine prints to resist the action of the atmosphere during warm weather or in tropical or semi-tropical climates. A serviceable mixture is prepared as follows: To nine parts of water, add one part of formaline. The mixture is applied for several minutes to the negative, after which the same may or may not be rinsed, and then dried at once. The negatives of the gelatine-negatives or prints, in the making, will be able to resist the action of liquids which attack the gelatine-film.

FIRST PRIZE
SPIRIT OF SPRING



"THE OLD, OLD STORY" WINN W. DAVIDSON

Advanced Competition—Architectural Subjects Closes October 31, 1918

It is several years since we have had a competition devoted to architectural subjects. At first glance, it might appear that the portrayal of beautiful bits of architecture involved no special technical or artistic skill for the reason that buildings do not move, nor may they be composed into groups the same as persons. True enough, buildings do not move and they cannot be asked to group themselves artistically, but the fact remains that architectural photography demands consummate skill. In all photography there is no subject that requires such attention to light and shade, to point of view and to treatment.

In this competition, photographs of domestic, church, commercial and government architecture are acceptable. A handsome façade of a bank-building can be made as attractive as a beautiful church by selecting the right viewpoint. The importance of shadows was particularly mentioned in the editorial, "Summer-Shadows," in July Photo-Era. By re-reading it, contestants will understand why a bank-building may make as beautiful a picture as a church if due attention is paid to light and shade. The object of this competition is to awaken camerists to an appreciation of the beautiful in architecture. Buildings in villages and towns are as effective subjects as those in the large cities. A Colonial church in a New England village may be made as picturesque as an old Spanish monastery in California. Likewise, the Woolworth Building in New York City is a constant invitation by day and by night to the ambitious camerist. My object in mentioning these subjects indiscriminately is to convey the idea—although roughly—that any building that possesses pronounced architectural beauty is a fit subject for this competition. However, contestants should remember that many older types of architecture

do not appeal to us to-day, although in their day they were considered to be marvels of beauty. The point to remember is to select some bit of architecture that makes a strong appeal and to photograph that in preference to another bit that is apparently lifeless and cold.

One of the most important preliminary steps to take with regard to all architectural subjects is a thorough study of every possible point of view. There will be always one point from which the best result may be obtained. As soon as this has been determined, a careful study of light and shade should be made. After many unsuccessful attempts "to get things just right," the camerist may find that by night his subject becomes alive with the very effect he cannot obtain by daylight. Often, an artfully concealed street-lamp works wonders. In some cases, lights from within the building enable the camerist to obtain the desired effect. Whenever possible, try to make the picture tell a story. Get away, if possible, from a purely commercial reproduction. Of course, some subjects are without even the semblance of a story; but there are many others that combine architectural beauty with artistic and spiritual feeling.

"Do not bite off more than you can chew," is an old adage particularly applicable to the subject in question. If a beautiful façade is preferable to a picture of the entire building—photograph the façade and let another attempt the whole building. By referring to the article, "Some City-Subjects," by William S. Davis, in July Photo-Era, workers will note that the illustrations on pages 17, 18 and 19 show but a part of the buildings and, in consequence, these pictures are more truly pleasing and effective. For example, the New York Public Library, on Fifth Avenue, is so situated that a front view is extremely difficult to obtain because of traffic. Even from the opposite side of the avenue, the average lens will not include the entire building satisfactorily. In this case, a much better course to pursue would be to photograph the building from another point of view—down or up the avenue—and possibly the best result would be obtained by confining the picture to the main-entrance or other important part of the building. In Boston, the Public Library is so situated that a view of the entire building may be had from the opposite side of a large square. On the other hand, pictures of various parts of the building's exterior may be made conveniently from three sides. From these remarks camerists should appreciate the value of the advice to study their subject from every angle, and under different kinds of light, before attempting to make a picture.

Nothing in architecture is more beautiful than a high tower, either standing alone or as part of a building. At the same time, there are few more difficult subjects to photograph. Unless the camera is equipped with a rising-and-falling front, or a swing-back, it may be well to seek other subjects, for a tower that is not plumb or one that is distorted will be rejected at once by the judges. In some cases, a camerist may be fortunate enough to obtain the desired effect some distance from the subject by using the single combination of his lens or by using a telephoto-attachment. Always remember that the plate or film must be absolutely parallel to the upright lines of the building to be photographed, otherwise the subject will appear larger at the top or bottom or vice versa according to how much the camera is pointed up or down. Attention to this point is advisable also when photographing from a housetop or a window. The use of wide-angle lenses is often necessary, although their use should be curtailed as much as possible in order to avoid distorted perspective. It is far more preferable to get far enough away to make use of the wide-angle lens unnecessary. True enough, this is not always possible. However, it may be seen readily that architectural photography involves much technical and artistic skill; and that personal initiative is no small factor to obtain successful results.

The question of exposure is of vital importance. Experienced workers know that a white marble building requires less exposure than one made of red sandstone even though both buildings are lighted by bright sunlight. Likewise it should be remembered that deep shadows underneath porticos and doorways require more exposure despite the fact that the sun may be shining brightly outside. The old maxim to expose for the shadows is very much in force with regard to architectural photography. In all cases, careful attention should be given to the material of which a building is made, particularly with regard to the color of entrances, façades, porticos and other parts of the building that differ in color from the main building. Since colors photograph to greater or lesser advantage it may be seen that a white building with green trimmings would require different treatment from a red building with white trimmings. These little points may appear superfluous, but successful architectural photography takes these very details into strict account. Needless to say, a reliable exposure-meter, ray-screen, tripod and orthochromatic plates or films are essential to success. Of course, excellent photographs are made without these accessories; but the chances of success are better if the camerist is equipped properly.

In view of the fact that a competition devoted to architectural subjects has not appeared in Photo-Era for several years, it would seem that many camerists should have excellent material to submit to the judges. The thousands of beautiful public and private buildings scattered throughout the world should be inducement enough for camerists to enter this competition from outside the United States. Virtually every competition brings entries from other countries than our own and we are only too glad to welcome these competitors. One word of caution with regard to photographing public buildings at this time, be sure to consult the police or other authorities before venturing near any public building with a camera. In every case brought to our attention the authorities have been very courteous. All legitimate photographers have received permission to make the pictures desired. Now and then, permission with certain restrictions has been granted; but in no case have we heard of any serious interference with the camerist's plans. We hope that this competition will prove to be one of the best from an educational, photographic and artistic point of view.

A. H. B.

Lens-Terms Briefly Explained

Achromatic

A term applied to a lens to indicate that it has been constructed of more than one kind of glass, in order that it may bring to the same focus rays of different colors. A non-achromatic lens has a different focus for every different color. As, therefore, in daylight we see chiefly by means of orange and yellow rays, which are the most powerful as far as affecting the eyes is concerned, but photograph by means of blue and blue-violet, to which the emulsion is most sensitive, if we focused with a non-achromatic lens we should not



EARLY SPRING P. BOETEL

SECOND PRIZE—SPIRIT OF SPRING

have the plate or film in the position which would give a sharp picture on it. An achromatic lens for photography usually brings the yellow and the blue-violet rays to the same focus. If it has had a further correction so as to bring a third color to the same focus, it is sometimes called an "apochromatic" lens, or an "apochromat," but the term is mostly limited to lenses for microscopy. Every photographic lens, unless it is required otherwise in order to give a soft out-of-focus result, should be achromatic.

Angle of View

The size of plate used and the focus of the lens determine the "angle of view." This is the angle included in the picture, measured horizontally or along the base-line of the plate. It should be distinguished clearly from the angle of the cone of rays forming the circle of illumination.

Aperture

Aperture may be defined as the size of the opening of the lens through which light passes. It can be ascertained, approximately, by measuring the diameter of the opening in the stop or diaphragm; but this method does not take into account the condensing-action of the front lens on the beam entering it, which may enable it to pass through a smaller opening than would otherwise be the case.

To find the actual aperture this must be taken into account. To do this the lens is focused on some distant object, and then the focusing-screen is darkened over or replaced by a card with a small hole in the center of it. A light is placed against the hole, when a beam of light will be found issuing from the lens, the diameter of which beam is that of the true aperture. The size of the beam can be measured by letting it fall on a piece of white card; or it can be recorded by putting a plate or a scrap of bromide paper in its track. The aperture is almost always spoken of in terms of the focal length.

Aplanatic

A term now seldom used. It was applied to lenses which could be used without stopping down but yet were free from spherical aberration. Such lenses were called "aplanats."

Astigmatism and Anastigmat

A defect in lenses which results in the image, except in the center of the field, being indistinct or blurred in a particular way. If it is the image of a +, it will be found that either the upright or the horizontal bar of the cross can be focused sharply, but not both at once. Focusing one throws the other out of focus if it was sharp originally. It was much more prevalent in the older types of lenses made before the many new glasses introduced at Jena were obtainable. Hence modern lenses, in which such glasses have enabled



"GOIN' FISHIN'" LOUIS F. BUCHER

THIRD PRIZE—SPIRIT OF SPRING

astigmatism to be reduced to a very great extent, are termed "anastigmats."

Circle of Illumination

If the camera used is large enough, it will be seen that the image given by every lens is a circular one, and the circle bounding the area over which the lens will form an image—(good or bad)—is known as the "circle of illumination." It is always in practice much larger than the circle over which the lens will give good definition.

Covering-Power

A lens is said to "cover" a plate of such and such a size when it will give good definition over the whole of that area. If the statement is made without qualification, it is understood that it will cover with full aperture. If the stop is stated, then the covering-power with nothing larger than that stop is implied. Generally speaking, the smaller the stop the greater the covering-power. As stopping down does not increase the size of the circle of illumination, it follows that the smaller the stop the nearer does the circle marking the covering-power approach the circle of illumination. The size of plate which a lens will cover is one the diagonal of which is equal to the diameter of the circle marking the covering-power.

Depth of Focus

This is sometimes called depth of field. It may be defined as the capacity of a lens to give sufficiently sharp images of objects at different distances at the same time. In practice, it is governed by the aperture or stop used: the smaller the stop the greater the depth. It is sometimes claimed for a lens that it has "great depth of focus"; but since this, if it mean anything at all, means that it works at a comparatively small stop, it is far from being a recommendation. For all practical purposes, every lens at the same focus and aperture has depth of focus to an equal degree.

Diaphragm or Stop

The diaphragm or stop is that part of the lens which determines the aperture at which it works. It is usually of metal and in most modern lenses takes the form known as the "iris-diaphragm." This is an appliance of metal-leaves—sometimes the leaves are of vulcanite—which slide over each other on moving an index or rotating a ring, so that the opening is made larger or smaller, while remaining approximately circular. "Waterhouse diaphragms" were loose plates of metal, each with a hole of different size. A "rotating-diaphragm" is a circular plate with holes of different sizes, mounted eccentrically, so that on turning it any particular hole can be brought into the axis of the lens.

Diaphragms are never described by their actual dimensions, since this does not concern the photographer, but by their relation to the focus of the lens. Thus if the lens is of eight inches focus and the stop is one inch in diameter, we do not call it a one-inch stop, but describe the stop as F/8,—pronounced eff-eight,—meaning that the stop is in diameter one-eighth of the focus of the lens. There is another system of numbering stops, known as the "U.S." (*q.v.*), but it also takes focus into consideration, as do certain other methods that have been suggested and used more or less.

The advantage to refer the stop to the focus of the lens rather than give its actual measurement is that it at once indicates the rapidity of the lens as compared with that of any other. Broadly speaking, we may say that all lenses in which the aperture is in the same relation to the focus require the same exposure. So that a lens with an opening of one-eighth of an inch and a focus of one inch requires the same exposure as one which has an opening one inch in diameter and a focus of eight inches, or one of six-inch aperture and four-feet focus, and so on.

R. L. Horton, in *Photography.*

(To be continued.)

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY

Pyro-soda for Dish and Factorial Development

Good formulæ are always to be desired. Here is one from L. A. D. in *The Amateur Photographer*.

The following pyro-soda formula is one which I have used for the last six years for dish and factorial development, and I have not yet come across one to equal it. It gives "perfect" negatives, and is absolutely non-staining. The formula is as follows:—

Stock Solution No. 1

Potass. metabisulphite	½ oz.
Pyro	1 oz.
Water to make	27 oz.

Stock Solution No. 2

Sulphite of soda	6 oz.
Carbonate of soda	4 oz.
Water to make	27 oz.

For use I take the following:—

Negatives for Enlarging

Stock solution No. 1	¼ oz.
Stock solution No. 2	1 oz.
Water to make	8 oz.

This contains ½ gr. pyro to 1 fluid oz. Factor 12.

Negatives for Platinotype, Etc.

Stock solution No. 1	½ oz.
Stock solution No. 2	2 oz.
Water to make	8 oz.

This contains 1 gr. pyro to 1 fluid oz. Factor 12.

I have found this the very best developer for factorial development and also development by inspection. This developer keeps excellent working-power up to twelve months.

Making and Keeping Developers

We have noticed from time to time a considerable difference in the behavior of developers—particularly pyro-soda—which were made from the same formula by different people. This difference appears to be due not to any difference of quality in the constituents, but to variations in the methods of compounding. The usual procedure is to dissolve the sulphite in hot water, often used directly from a geyser or similar device, and as soon as solution is complete—sometimes before—to add the pyro to the warm solution. If metabisulphite be used in addition, it is often dissolved at the same time as the sulphite, with the result that some of the free sulphurous acid is driven off, and the effect of the addition is proportionately nullified. If we compare a solution mixed in this way with one made in a more rational manner a very considerable difference in energy will be perceptible, and as energy is what we pay for, it means economy in expenditure in chemicals, besides an improvement in the quality of the negative. The first step to be taken is to boil the water thoroughly and then to allow it to cool, and to precipitate as much of the suspended lime as possible. Of course, if distilled water be used this is not necessary. The next step is to pound the sulphite in a mortar till it is reduced to a coarse powder. This only takes a moment or two, and facilitates solution greatly. The metabisulphite may be powdered at the same time, and the whole dissolved at quite a low temperature. The pyro is then added, and dissolved with as little shaking as possible. The same precautions should be observed when making sulphite-solution for amidol developer, and a noticeable improvement in the color of the solution and keeping-qualities will result. Another point is the degree of concentration of stock-solutions. When an ounce of pyro can be used up in a day or two the practice of making the solution of working-strength may be followed; otherwise, it is better to use one-fourth this bulk of water and to dilute for use as required. Such concentrated solutions keep their energy much longer than weak ones, and, moreover, allow considerable modification of the strength and proportions of the working-developer.

British Journal of Photography.

A Focusing-Tip

I have lately been given a hint by an advanced worker which might be useful to other readers. There is sometimes difficulty to compose a picture on the focusing-screen owing to the upside down position of the image. If a small mirror be held about horizontally against the lower side of the screen, under the focusing-cloth, the image will be seen the right-side up in the mirror. The best angle will be found by trial. It is very useful in portraiture, when details of dress, etc., are apt to be overlooked.

F. S., in *The Amateur Photographer.*

A Substitute for Bromide of Potassium

An effective substitute for bromide of potassium is mentioned by *The Amateur Photographer*. The quantities of bromide of potassium available for photographic purposes are—during the progress of the war—becoming less and less; and those who use this valuable salt in various operations may have had cause for alarm at the steady rise in price. They can be reassured, however, and will find that bromide of sodium—a chemical that is much cheaper than the potassium salt and is more freely obtainable—will serve practically the same purpose in photography. We have used this chemical recently with complete success as a restrainer in various developing-formulæ for plates, films, and papers, and found that its action differed but very little from that of bromide of potassium. In the various bleaching-baths for sulphide-toning it replaces the potassium salt, weight for weight, and the results are indistinguishable from those for which the original formulæ were employed. We have used it also in both the ferricyanide and copper bleaching-baths for the bromoil-process, and here again no difference in the action is discernible. Bromide of soda is obtainable in the form of a white powder, which readily dissolves, and we suggest that our readers in future make use of this instead of bromide of potassium.

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $5.00.
Second Prize: Value $2.50.
Third Prize: Value $1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous"***; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than one year's practical camera-activity, and without any practical help from friend or professional expert. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4}$ x $3\frac{3}{4}$ to and including $3\frac{1}{4}$ x $5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition
Closed June 30, 1918

First Prize: None awarded.
Second Prize: George P. Eaton.
Third Prize: T. P. Payne.

Change in the Beginners' Competition

THE Publisher is fully aware that the character of this competition calls for a change. By having permitted workers to enter prints here that have never been in a competition elsewhere, he has given a generous scope and wide interest to this competition, which appears to have won general approval, judging by the number of participants. Of late, however, the pictorial standard of contributions to this competition has been of a very high order—so much so, indeed, that real beginners have been crowded out.

In future, this competition will be limited to actual beginners, but not to those who have been using their cameras only a few weeks. Competitors must have had some really practical experience in pictorial selection, developing and printing. Those who make only the exposures, entrusting the photo-finishing to others—friends or professional experts—are not eligible; neither are workers of over one year's camera-activity. Past and future participants who have won a first prize in the Beginners' Competition automatically drop out, but may enter the Competition for Advanced Workers. The three prizes, offered in the Beginners' Competition, will be continued as heretofore.

An Exposure Note

A HINT of value is given by R. M. F. in *The Amateur Photographer.* It should be an unchanging rule for all careful workers never to make an exposure without consulting a meter, but at the same time it must be admitted that this is not often the case, and the worker who uses a stand-camera and most religiously makes a test of the light for each exposure, when using a hand-camera makes a guess based upon a remembrance of some previous subject as to what the exposure should be. As an example of the unreliable uniformity of the light within a distance of four hundred miles, the writer found by a carefully made actinometer-test the new area in which he happened to be required only three-fourths of that which would have been regarded as the minimum where he was previously working. This note is penned in order to draw attention to the fact that the light in different parts of this country differs widely in actinic power, and for this reason when working in a new area a careful test should be made for each exposure. The writer has estimated that near the sea or forty miles inland makes a difference of about three-eighths in the exposure, and it is to be pointed out that the nearer we are to the sea the shorter the exposure, is due to the more powerful actinic quality of the light due to the action of the water as a reflector. The points noted above should be kept in mind during the holiday season by those who would avoid wasted plates or films.

SECOND PRIZE
BEGINNERS' COMPETITION



THE WINE-VENDOR — GEO. P. EATON

The Last Call

Many beginners began the summer-season with a new camera. They were filled with enthusiasm and expected to do great things, photographically. Then came the results of their first attempts. In many cases, there was disappointment, discouragement and, perhaps, a decision to consign all things photographic to the waste-basket. Those who are hovering between a determination to try again and an inclination to cast their cameras aside should take heart. The summer is not over and there are still many opportunities to use a camera. However, the point is to use the camera to advantage and with success.

Let us suppose that a beginner had very poor results; that he does not know why, and that he is about ready to give up photography as a snare and a delusion. Suppose that we take a look at his negatives. Most of them are virtually transparent. On looking at the camera, we find that our beginner had the shutter-speed set at 1/100 of a second and the diaphragm-pointer at F/16. Moreover, we learn that most of the pictures were made between four and five o'clock in the afternoon. No wonder our beginner has thin negatives! An exposure of 1/25 of a second at F/8 would be none too great with the average camera at that time of day. Another negative shows what purports to be a group of vacationists; but all are so badly out of focus as to be unrecognizable. The focusing-pointer was set for ten feet instead of twenty feet; hence the distortion. A group of fifteen or twenty-five persons should never be attempted at such short range. In addition to putting each one out of focus, there is imminent danger of cutting off either the heads or feet of those comprising the group. Rather err on the side of too much distance than too little. Still another negative shows motion. A man holding a fish aloft appears to be standing in a terrific gale of wind due to our beginner moving the camera to right or left at the moment he pressed the shutter-release. The last few negatives show light-streaks. Since the camera is new, these streaks cannot be traced to a faulty camera-back. After some investigation, we find that the beginner carried the camera one entire morning opened ready for use and that several times he set it down on the sandy beach exposed to the full glare of a hot and brilliant sun. No camera is made to withstand such exposure to intense light. As a matter of fact, the heat from the sun's rays alone may cause fogging. In no circumstances carry any photographic equipment opened and exposed to the sun's direct rays one moment longer than absolutely necessary. All cameras of reliable manufacture are light-tight

when closed properly, and they should be kept closed except when exposures are being made.

Without further enumeration of beginners' troubles, let us assume that our tyro has seen the error of his ways and that he is determined to "make good." This is the spirit that every amateur photographer should display who has not succeeded as well as he might. The determination to master photography and not to be mastered by it, is the sort of mental preparation needed to attain success in the face of apparent failure. The next step is a physical one and demands close attention to the lessons taught by the negatives we have examined. Let the beginner make up his mind to set the shutter-speed and diaphragm correctly, to focus accurately and to hold the camera motionless at the moment of exposure. Of course, it is not always possible to judge light-values, shutter-speeds and distances mathematically correct. Fortunately, modern dryplates and films have such latitude of exposure that if the beginner is reasonably accurate in his judgment he will obtain results.

There are several weeks left in which the beginner can obey the last call to prove to himself that he is master of his camera. An exhaustive examination of his earlier efforts has shown him that the final success or failure of his photographic career is strictly "up to him" from this moment. Those beginners who have the right stuff in them will relish the test; those who are faint-hearted or disgusted have the opportunity to drop out. There is no halfway position. Either a beginner *can* make a good picture or he *cannot* do so by mid-summer. If he cannot do so, *now* is the time to make a second attempt. Every beginner should realize a profit on his mental, physical and financial photographic investment. He should have at least *something* to show for his time and effort.

Most beginners take up photography as a vacation-pastime, hobby, or because some friend owns a camera. I wonder if beginners ever thought of the possibility that they might eventually give pleasure to thousands by their pictures. Virtually every contributor to PHOTO-ERA, at some time, was a tyro, struggling against discouragement and apparent failure. Does it not appear reasonable to assume that many beginners possess inherent artistic talent that must be encouraged and supported during the embryonic stage of their photographic development? In fact, our Beginners' Competitions bear this out convincingly; for many of the pictures show evidences of technical and artistic merit that could never be acquired solely by mechanical means. In short, let every ambitious beginner assume that he possesses certain potential pictorial forces which honest effort will unloose for the benefit of himself and others. I do not mean that the beginner should esteem himself to be what he is not; but that he should take pride in his efforts—no matter how humble they may be—and that his goal should be the highest and best in photography.

Although this has been more of an inspirational rather than a practical talk, I hope that beginners will get the point I have tried to make. The last call is a challenge to renewed effort and determination. Let them forget the many disappointments, the wasted money, plates, films and paper and let them start anew unfettered by the past and refreshed by a glimpse of the future. There is an indescribable satisfaction in doing that which we know to be right. Beginners who begin now to take their photographic work seriously will enjoy the fruits of their effort for many years to come. If they eventually rise to fame, the first pictures will be doubly precious; if they do not, the first pictures will ever occupy first place in their hearts.

A. H. B.

A Fine-Grain Focusing-Screen

A WRITER in *The Amateur Photographer* offers an excellent suggestion with regard to obtaining a fine-grain focusing-screen. In copying and photo-micrography, and all work where very fine focusing is essential, ordinary commercial ground-glass is much too coarse in its grain for accurate work. Many processes and formulæ have from time to time been given by various workers for home-made focusing-screens by methods which involve the use of a variety of chemicals on ordinary dryplates. These methods, although in some hands affording very good screens, have the disadvantages that under the present war-conditions the materials necessary are very difficult to obtain, and expensive if obtainable, and also that a certain amount of experimenting is necessary before a satisfactory screen is evolved, the "personal element" entering largely into the question. The following method, however, will be found to yield a screen with as fine a grain as could be desired, and which in addition is very simply made. Take a sheet of ordinary glass of the right thickness—ordinary negative-glass will do, but plate-glass is preferable—and lay it perfectly horizontally on a firm surface where it can remain undisturbed for a day or so. Then carefully cover it all over with a thin layer of ordinary milk, using just enough to cover the glass completely, and taking care that none runs over the edges. Leave it undisturbed to dry, and in a time ranging from a few hours to one day, according to the weather, the milk will evaporate, leaving a finely deposited white substance on the glass, which surface will be found admirable for focusing purposes. If this first application results in a screen which is thought to be too transparent for some purposes, a further treatment in a similar manner will strengthen the deposit and make the screen more opaque.

Luck in Photography

MANY an inexperienced camerist runs away with the idea that there is an element of luck in photography, and for that reason makes several exposures of each subject in the hope to get a good one. The writer was present, not long ago, when a camerist was showing a collection of his pictures with considerable pride. He was justified in a measure because the pictures averaged very well as regards to choice of subject and workmanship. In several instances the camerist boasted that he had made no less than eight exposures before he got a good one, hoping in this way to receive more credit than if he had been successful with only one exposure. This is wrong. What would you think of a baseball-player (shortstop) who fielded the ball properly to first base accurately only once in five times? Or, if the hunter missed his quarry five out of six times? Any professional baseball-player, who depended upon luck to field the ball properly would not remain long with the team. The visitor to a shooting-gallery who hits the bull's eye or knocks down a moving figure at every shot, excites more admiration than he who hits the mark only once or twice in a dozen trials. The camerist who can say, truthfully, that he made only one exposure of a subject, and that one exposure was a technical success, is sure to receive more credit than when it became known that he had made many attempts before he succeeded.

Then there is to be considered the element of econ-



THE CAMP — T. P. PAYNE

THIRD PRIZE—BEGINNERS' COMPETITION

omy and of waste. The camera-user who consumes a dozen rolls of film and a corresponding number of prints, including the necessary chemicals, before he gets one successful result, is very apt to abandon his hobby as too expensive to maintain. Photography, after all, has been proved the least expensive of all outdoor sports, in proportion to the cost of equipment and materials invested. The camerist should study photography in its various aspects, so that his every exposure scores a hit instead of depending upon mere luck for success.

This reminds the writer of an experience he had, about twenty-five years ago. He had spent a week-end in the country and was returning to the city with his equipment, including six double plateholders filled with twelve 6½ x 8½ exposed plates. In chatting with his traveling-companion, he casually touched upon the subject of photography. On inquiring about what the square box contained, he was told twelve pictures. The subjects were described to him. His companion expressed his astonishment and doubt. "I don't see how you can be so sure of your successes when you have not developed your plates yet. You explained to me only a few minutes ago that it was impossible to tell when a dryplate had been exposed by merely looking at it or through it, and what you call the latent image remained unborn for days, weeks and even years, until it had been placed in the developing-solution. How, then, can you arrange to dispose of prints to your friends, in advance, when you have not even developed the plates and don't know whether or not you have been successful? This seems to me like counting chickens before they are hatched. It seems to me that you are going too far, not only to brag about what you have got, but even promising copies of pictures to one of your friends, as I heard you do a little while ago. I suppose you are having a little fun at his expense, and should you be unable to fulfil your promise you would find some excuse, the way others do. One of my friends, who occasionally makes a good picture, will say that he gave too much time, and, in another case, too little time, or the developer did not work, or he broke the negative by dropping it transferring it from the developer to the fixing-solution. In short, he is ready with excuses every time his camera-trip is a failure. It almost seems like a joke for you to promise to send a print to this man, that print to another man, and so on, when you don't know for a certainty that such and such an exposure will turn out to be a success. Come now, confess! You were only kidding your friend. Am I not right?" At this juncture, the two were joined by the friend of the writer to whom a certain number of prints of the unexposed pictures had been promised. It was then agreed that on the third day, which was Thursday, all three should meet at the office of the camerist and examine the successful pictures. The camerist described a well-known bridge at the end of a pond; another, a view of an old barn nearby; another, a loving couple at an old gate, and so on. The discussion finally ended in a wager, which the doubtful traveling companion was quick to accept. The result was that the three met at the time and place appointed, and to the great astonishment and conviction of the gentleman who had been eager to view the work of the camerist, he was shown twelve successful and fairly meritorious pictures which corresponded to the description given him three days before.

It can readily be seen by the beginner that it is far more satisfactory and gratifying to arrive at such a stage of successful practice than to depend upon chance to get a good picture, which results in wasting a lot of costly material and valuable time and ends in one disappointment after another. Is it not a joy to feel that after the exposure has been made, and excepting unforeseen accidents, it represents an assured and dependable success?

W. A. F.

ANSWERS TO QUERIES

Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.*

W. C. E.—**We note your reference to the separation of lenses in the symmetrical lens.** In view of the fact that you do not state the make, we cannot be of very much assistance with regard to a systematic way to find the exact separation of the two combinations. If you will let us know the lens you refer to, we believe that we can obtain the exact millimeter separation from the manufacturer, and this we will be pleased to send to you.

O. O. H.—**In our opinion, we should list the camera and lens separately.** If the lens that you used was one that came with the camera, and of the correct focal length for a 5 x 7, we would then advise advertising the entire equipment as a unit. We are afraid that, if you advertised it with its present equipment, the purchaser, when he used it, might feel that there had been misrepresentation and, of course, neither you nor we wish for any such interpretation. In all such matters we believe that it is best to be perfectly frank and then there can be no misunderstanding. Incidentally, in mentioning the 6-inch focus Conley lens, you might mention that it is very satisfactory and that on a Premo No. 6 it does admirable work. By so doing, some of our readers may be glad to take the equipment as it stands.

With regard to price, we would suggest that you figure about 60% off the list price, or the price that you paid for the equipment. This is the price that you would be paid if you tried to sell the equipment to a dealer, and, at present, used cameras are plentiful, and I do not think that you could do much better. Make one price for the camera and accessories and another price for the lens and, if you wish, a price for the equipment complete, after due mention has been made of the lens, as suggested.

D. W. R.—**We note that you speak of a friend who was troubled with refraction in his 5 x 7 Graflex camera,** with the lens stopped at F/8. We are of the opinion that the lens was not so much at fault, as the manner in which your friend manipulated the shutter—particularly when photographing fast-moving objects. Unless great care is used the focal-plane shutter will show a form of distortion, which is best described by stating that round objects sometimes become the shape of an egg, and straight lines may also become somewhat curved. This can be avoided by a careful selection of the right point of view. With regard to being afraid that a 5 x 8 Goerz Dagor lens would have a slight tendency to fog when used wide open, we are of the opinion that if you obtain a correctly cemented and mounted Dagor, you will have no trouble. Incidentally, in this connection we might state that your dealer could allow you a ten days' trial of this lens, and that this would enable you to settle the point yourself. The matter of the foreground—using the lens at F/8, and you being five feet six inches tall—reduces itself into a matter of focal length. That is F/8 with an 8¼ inch lens would probably show a blurred foreground. With the camera held at waist level and a shorter focus lens at the same stop, it would not show this blurred effect. We do not believe that you will have trouble if you use a camera 3¼ x 4¼, or posteard size. If you should select a 4 x 5 Revolving Back Graflex, you would use another focus lens, and in consequenee might have some trouble. With regard to a 4 x 5 Smith Visual Quality lens, a nine-inch focus might give you trouble, although the diffused effect obtained might not mar the photograph. We note that you have difficulty to obtain the right sort of negative for enlarging, and think that your developer may be at fault. We would call your attention to the fact that exposure may be in part responsible for the existing density of the negative. Secondly, we would suggest that you write to the manufacturer of the plate you are now using and ask him to give you the formula best, in his experience, for use with his own emulsion. In view of the fact that most manufacturers maintain their own research-laboratory, we believe that you will obtain the best results by doing as we have suggested.

G. B. G.—**The quickest method to mark plates is to do so with a lead-pencil on the margin.** By that, we mean to place a small number or letter in one corner, and then, on a piece of paper or in a notebook, set down whatever corresponds to the number or letter that you have written on the plate. The writer has developed hundreds of plates, and has always found that this method, simple as it is, has avoided any complieations. The methods to mark plates are so varied that there is no limit to the means to keep each negative separate from any other negative. It matters little whether it is one negative or two or three dozen negatives in one batch. In either case the use of a letter or a number in rotation will keep each plate separate. As an example, suppose you have twelve plates which you wish to distinguish from fifty other plates. Before loading into the plateholder, mark in one corner of each plate, beginning, we will say, with A1, A2, A3, etc., to A12. The lead-pencil mark will not be removed through any chemical action necessary to develop and fix the plate. When the process is completed, and the plates are dry, each plate will bear the number, as indicated above, and you will have no difficulty to distinguish it from the others.

J. G. M.—**A small camera, taking pictures 1⅝ x 2½, equipped with anastigmat lens with a speed of F/3.5, may be obtained,** providing that the fitting is done by a competent optician. It has been found possible to take a lens, such as the Goerz Kino Hypar at F/3.5, three-inch focus, and fit it to a compound shutter, which again may be fitted to a Goerz V. P. Tenax Camera. The entire matter depends upon whether you are able to obtain such a camera new or second hand, and also whether the C. P. Goerz American Optical Company, 317 East 34th Street, New York City, would be willing to consider making the required changes. We would suggest that you write to them direct.

A. M. H.—**The curvature obtained now and then in panoram-prints is due to the fact that the lens in your camera swings on an axis.** Whenever you are photographing straight lines, such as a street or a fence, these lines are apt to curve, due to the fact that the lens is in motion. In the Cirkut cameras, mentioned in our previous letter, the film itself is moved by a clock-work mechanism and the lens remains stationary. In this way there is no distortion, and a picture of any sweep, even an entire circle, may be made with excellent results. We would suggest writing to the Eastman Kodak Company, Rochester, N.Y., for their latest descriptive matter dealing with Cirkut cameras. The information which you will obtain will be both instructive and interesting.

PRINT-CRITICISM

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.*

E. G. R.—The picture of an old log cabin, apparently deserted, with a mangled, leafless tree at the left and the chimney at the right, is somewhat stiff and unattractive in appearance. If the old domicile had been photographed from a different viewpoint, and on a bright rather than on a dull day, the result might possibly have been more attractive.

A. M. H.—In "The Charm of the Heights," a picture showing a group of women with a dog occupying a risky position on the top of some rocks at considerable height, the upright branch of a dead tree rising straight in the middle of the picture, is a serious detriment to the arrangement, and extremely inartistic. The print also shows considerable underexposure, hence the highlights on the rocks and the women's dresses, the excessive contrasts resulting in a spotty appearance. We would not have chosen this picture for its artistic possibilities, but rather as a record of an outing.

C. C. B.—In "The Little Haymakers" the two boys are walking out of the picture. The same subject could have been made with the boys marching toward the camera or a little bit to the right or left of the center; but when they are walking across the path of the camera and directly away from the center of interest, the composition suffers thereby.

R. A. W.—Your picture, "The Curving Bank," expresses a praiseworthy motive, which, however, lacks a definite viewpoint. The effect is rather decorative, and shows how beautiful the original view in the woods must have been. The scattered highlights on the tree-trunks, at the extreme right, and at the top, showing fragments of the sky, are somewhat distracting. By covering them up with each hand, you will quickly see how much better the picture will look were they subdued or even eliminated which can be done easily in the negative.

F. P. M.—Your print of a cascade looks like an underexposed effort made by strong electric light, as the water and reflections are brilliant white without detail, and the contrast is so great as not to suggest any notion of reality or fidelity. The subject seems to be an attractive one. Please try again and see if you cannot obtain a picture with true color-values and gradations.

W. R.—The trouble with the head of the young girl is that the left eye is half closed, though the right one is less so. Whether this is due to the lighting or a physical defect is not clear. If the latter case, it would have been well to have posed the model in profile, and thus concealed the inequality of the eyes.

R. A. W.—The picture, "Licking the Kettle," is a good subject but very fuzzy. Is there any reason why it should be so? The figure is placed exactly in the picture-area. The background, consisting of trees, and through which the sky is visible, gives a very spotty and disquieting effect, which is not artistic or pleasing. This is a common fault with pictures of this sort. Just behind the boy's head appears to be what looks like a white tent, which could have been avoided.

"The Cloud Over the Sun" is well named; it certainly dominates the picture. Nevertheless a more pleasing result could be had by trimming this largest cloud entirely away and leaving a wide horizontal panel. Even then there would remain an excellent cloud-effect, occupying fully two-thirds of the picture-area, and the spacing of the whole composition would be improved.

"Winter Shadows" is excellent in its blue-black tone, but it seems to lack a center of interest.

L. C. C.—Your picture of a road along a river has the common fault of dual interest. Either the stream at the right should form the center of attraction, or the very pretty road at the left. I would suggest that you trim away, at the right, the view of the stream, leaving the view of the road, which, with about one inch cut away from the bottom of the print, will leave a complete and satisfying picture.

E. B.—The young lady, seated at a desk penning a letter to some dear one, evidently in her own boudoir, surrounded by favorite pictures, books, etc., is not a *portrait*, for obvious reasons. Very likely, if the young woman turned her face to the camera, it would present a far different aspect than from the present near-profile. It also might be classed as "Miscellaneous," with the possible title, "A Letter to Mother," or "A Letter to Him." This title could be varied. The picture is very meritorious, indeed, and worthy of recognition.

U. E. D.—A very stiff and angular pose. The fact that they are having their picture taken is evident in pose and expression. If the woman instead of the man had been sitting, and he leaning over to look at a book or other article in her hand, the stiffness might have been avoided. The camera was not held level, as the converging lines of the door-casing show.

L. E. H.—"The Path o' Dreams" is distinctly pleasing in its sunlight falling upon a little rustic bridge in the middle-distance, and had the foreground at the lower left-hand corner been defined a little more clearly the result would have been greatly improved.

A. S.—Trim away the image of the window, now the highest light in the print, from your child-study and the undivided attention of the observer will be focused upon the figure.

C. M. DEB.—In "The Graduate" you have a portrait which must be pleasing to the sitter and her friends, although we are inclined to criticize the hair-ribbons, now forming the highest light in the subject, which we believe should be reserved for the face.

A. A. C.—"Fleur de Lis" is a little lacking in definition and distinctness. The best way to improve it would be to lower the tone in the distant sky in the trees so as to concentrate interest upon the figure.

J. E. L.—Enlargement is necessary to make the most of such a subject as "Spring-Landscape," which impresses us as being decidedly a winter-landscape, with snow on the ground and no foliage.

MRS. H. G. R.—Of your three prints "Fairy Tales" is the most pleasing and technically the best, although this lacks unity in that the girl is reading her book and the boy is looking into the camera.

"The Magnolia Tree" also lacks unity; the child has been placed very near the edge of the print and is looking out of the composition rather than into it.

"Posing" appears to be a flashlight, but in any case the plate suffers through too great contrast, partly, if not entirely, due to overdevelopment. The only satisfactory way to render whites by photography is with ample exposure and restrained development, usually short development with a considerably increased quantity of water or decreased quantity of reducer.

OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Successful Criticisms

THERE are three bad points in this otherwise pleasing little picture. In the first place, the camera was not held level. In the second place, the unnecessary shore in the distance is so dark that it draws the eye away from the little girl. And, last, the figure of the little girl is placed poorly in the print. The camera should have been pointed so as to exclude the distant shore and place more space in front than in back of the little girl. Also, a little more room should have been left at the bottom of the print for the interesting shadows on the sand. This department adds much to PHOTO-ERA, I think.

FERLAND DEWITT GILPIN.

THE expression on the little girl's face and her animated action are well rendered; but the general tone of the picture is very poor—too much chalky space, throughout. The water, sky and beach all present the same shade of gray white. Unfortunately, the figure is improperly placed, for the feet are too near the lower edge and there is too little space in front of her line of progress, thus giving the impression of her as walking out of the picture. The distant strip of land detracts from the pictorial merit, because of its shape and position, it appearing like a dark band of uninteresting matter resting on the girl's head. The lines of this strip, being nearly parallel to the sides of the picture, are disturbing. One and ½ inches trimmed from the right, and ⅜ from the top will improve the picture.

GEO. W. FRENCH.

THE picture is interesting, but needs a few changes to make it entirely pleasing. It would be better balanced if the child had been farther to the right and so appear to be walking into the picture. The attitude of the child is good, but the flesh-values are too dark. If possible, an eighth of an inch more should be added to



THE PICTURE CRITICIZED THIS MONTH

the bottom. The water beyond the incoming wave has no texture, for from its appearance one might think it was ice. The camera was not held quite level. The whole picture would be more pleasing, if the strip of land across the water was not so dark.

JOSEPH COBURN SMITH.

I BEG to submit the following criticism of your July picture, entitled "A Pebble on the Beach":—

The bad points of this picture are obvious. First comes the dark strip of terra firma across the top, irritating to the eye, of itself uninteresting, and wholly out of place in a beach-picture; second is the extreme underexposure, which "froze" the wave and destroyed the shadow-detail on the little girl's face and head. The head is at an unfortunate angle, giving neither a profile nor a back-view. The moment of exposure was ill-chosen; were an oncoming wave threatening the child's toes, or a receding wave swirling at her heels, the picture would possess the action it now lacks. The toes of the left foot are almost out of the picture, cutting out the attractive reflection on the wet sand.

EDGAR T. ZOOK.

A STRIKING example of what not to do. No attempt at balance, either of line or lighting, is observable. The lines lead out of the picture in one direction, and the child appears to be leaving it in the other. The broad, triangular expanse of lifeless and characterless water has lifted the farther shore into detached remoteness, and unpleasantly silhouetted the child's head. The details are isolated and distracting. A vastly improved effect would have resulted from placing the child to the right of the picture, with a rock or other appropriate object in the left foreground, and softening the straight parallel lines of the farther shore by a more varied lighting.

FRED F. LAWRENCE.

THERE are several faults which limit the success of this picture of a charming little lass advancing to meet the oncoming waves. The little girl is both looking and walking out of the picture, thus carrying the attention out of the picture-space. The lower margin snipping off the end of a big toe, further detracts from the unity of the composition. The amputated shadow is needed to give variety to the tones in the picture. The exposure and development were not adequately adjusted, giving too dark flesh-tints and milky water lacking detail. The shoreline together with the horizon show that the camera was not held level. If the camera had been held further away from the little girl and shifted so that she would be advancing into the picture, then generous exposure followed with a diluted developer would have given a very pleasing picture.

CLARENCE A. PIERCE.

CRITICISM of picture, page 46, Month of July. The function of a background is to make itself accessory to the main idea and to keep where it belongs—strictly in the background. Here the background is obtrusive and "leaps to the eye"; a heavy black mass in a high-key picture. Moreover, the shoreline is not horizontal, and creates the idea that the water is not level. There is no gradation of tone in the water itself, and it might as well be ice, so far as we can see, except for the surroundings. What does the top of the picture represent—water or sky? It looks more like water than does the center of the picture.,

Per contra, there is no foreground, and one almost shudders to note that the child's toe is cut off so short. The child's head appears attached to the shoreline—an unfortunate combination of black masses, and the peculiar arrangement of light on the fluffy hair gives the impression of a tremendous bump on the cranium at first sight.

E. L. C. MORSE.

OUR ILLUSTRATIONS

WILFRED A. FRENCH

The cover-illustration, this month, is in the nature of what I consider a pleasant surprise—a pictorial masterpiece by F. J. Mortimer, F. R. P. S., England's foremost marine photographer, also the distinguished editor of the *Amateur Photographer* (now merged with *Photography*) and *Photograms*. The incident portrayed by Mr. Mortimer is the flotilla of American torpedo-boat destroyers—preceding the main American fleet—as it entered British waters, May 4, 1917, and whose arrival in Queenstown, shortly after, occasioned the British Admiral's query: "How soon will you be ready for service?" and the American commander's prompt reply: "We are ready now!" Indeed, this is the keynote of Mr. Mortimer's superb picture, which is a triumph of pictorial composition. The average photographic representation of the Stars and Stripes leaves much to be desired with regard to grace and effectiveness. Pictures of Old Glory drawn by hand are often ludicrous in their distorted appearance, if not absolutely incorrect. The cut used by a syndicate of newspapers represents the American flag in a series of vertical folds quite at variance with actual truth; for if this same flag were extended, its length would be all out of proportion to its width—more like a pennant than a flag of standard dimensions. After numerous unsuccessful efforts to obtain a satisfactory photograph of the Stars and Stripes floating in the breeze, a well-known American art-publishing firm resorted to kinematography and got what it wanted. I am told that there is a trick in photographing a large flag flying in a strong breeze—not a gale, as frequently seen in motion-pictures—and the experienced camera-man will get admirable results with a few exposures instead of wasting a lot of valuable time and material before he gets even one passable arrangement. In aiming at a pleasing representation of the American flag, Mr. Mortimer appears to have resorted to "stopping," i.e., fastening the emblem to the staff with a line, as shown in the present picture, thus checking the soaring tendency of the flag in a high wind. For an Englishman to have produced so strikingly artistic a result, is a compliment to America and one that will be fully appreciated.

Mr. Mortimer's picture, which appears also on page 127, has been made also the subject of this month's leading editorial. No data, except that the print is an 11 x 14 bromide enlargement.

The illustrations that accompany Mr. Davis' paper on camouflage-photography are descriptive, and yet it is evident that the artistic element need not be lacking. Witness figures 3 and 4. When a genuine artist treats subjects of a prosaic character—be he a musician, a painter or an illustrator—he cannot help investing them with his artistic individuality. Who knows what artistic possibilities may not be developed in the representation of even such quasi-scientific and unpromising themes as are found in camouflage-photography?

When, however, Mr. Davis can give free rein to his artistic impulses, and the theme is one of his own choosing, he rarely fails to produce a thing of beauty. How masterful is the design of the group of wild ferns in their native woodland-home, how admirable the arrangement of the graceful plants, the lighting, and the management of the background! Good judgment is also shown in the degree of definition chosen to depict the delicate beauty of the ferns. To increase the detail—as shown here—or to attempt to diffuse it, would be to mar the present highly satisfactory effect. Data: June, 11 A.M.; good light, but ferns mainly in shade; 4 x 5 view-camera; 6-inch Ilex Anastigmat; stop, F/16; 1 second; 4 x 5 Roebuck Double-Coated Ortho; pyro, in tray; 8 x 10 enlargement on Velours Black.

Another timely outdoor-view is presented on page 125. It must be tantalizing to the city-man to be shown a print of this alluring picture, unless, indeed, he has the opportunity to tear himself away from his daily indoor task and seek the welcome relaxation and complete change of scene, as is depicted by Mr. Klintworth, in his attractive and pleasingly balanced composition. Data: September, 3 P.M.; faint sun; 1A 2½ x 4¼ F. P. K.; 5-inch Kodak Anastigmat F/7.7; stop, F/11; Eastman N. C. Film; pyro in tray; enlarged on Cyko Contrast Studio; developed in Monomet-Hydro; hypo-alum sepia.

Those who are reading—entertainingly and appreciatively—C. W. Christiansen's valuable paper on pictorial photography—to be concluded in the October issue—will know how to estimate the thoroughly artistic qualities of this master-worker's illustrations—the group of oxen, page 129, the morning-landseape, page 131, and the architectural study, page 132. Data: "Pioncers"—August, 3 P.M.; bright light; 4 x 5 Graflex. 11½-inch Spencer lens; stop, F/8; 1/75 second; 4 x 5 Orthonon; Rodinal; carbon enlargement. "Morning-Shadows"—July, 6.30 A.M.; good light; same camera and lens; at full opening; 3-time color-screen; 1/5 second; same plate, developer and printing-process. "Italian Garden"—July, 3 P.M.; bright light; same camera and lens; stop, F/16; 3-time color-screen; same plate, developer and printing-process.

Away up in his Canada home, Bertran F. Hawley finds unalloyed pleasure in the pursuit of his hobby—photography. And his beautiful results are due chiefly to his passionate love of nature—at all seasons of the year. Though his interpretations of winter-themes—when the snow is deep and high—are notable for their delicate play of light and shade and poetic suggestiveness, the present illustrations deal exclusively with summer-subjects. A careful reading of Mr. Hawley's story will reveal the artist's method of choosing and treating his theme, which will be found of great practical value to all but the advanced pictorialists. Even they may find something of real interest in his modest recital, which was penned in response to an invitation of the Publisher. The pictures that illustrate and embellish our artist's "confession of faith," reveal profitable study of the rules of composition and light and shade—combined, of course, with true artistic feeling and an ardent love of the great outdoors. Data: "Where Cowslips Bloom"—May, at noon; bright hazy sunlight; Bausch and Lomb F/6.3 lens, 6 7/8-inch focus; Ideal ray-filter; stop F/11; exposure 1/5 of a second; 4 x 5 Royal Polychrome plate; enlarged on Azo II.

"The Birches"—May, about 10 A.M.; bright sunlight; same lens, filter, plate and exposure; printed on Azo K. "The Beaver-Meadow"—September, about 2 P.M.; bright cloudy light; same lens, filter, plate and exposure; enlarged on Azo H. "Water-Lilies"—August, about 4 P.M., bright sunlight; Bausch and Lomb Anastigmat F/6.3; 6⅞-inch focus; wide open; 1/25 of a second; 4 x 5 Wellington Extra Speedy plate; enlarged on Azo H. "Summer"—August, about 3 P.M.; bright sunlight but in heavy woods; Cooke 8-inch lens, series IV; F/8; 1/5 of a second exposure; 4 x 5 Royal Polychrome plate; enlarged on Carbon Black Buff.

Philip M. C. Armstrong, an active member of the Detroit Camera Club, and one who has contributed materially to the success that it now enjoys, is a worker of modest pretensions, but with a strong passion for his hobby. He admires the advanced style of pictorial expression, and delights to record with a very small camera incidents of ordinary activity and then to enlarge them invested with breadth and atmosphere. Such an example of his penchant has been reproduced on page 142. The subjects were entirely unaware of Mr. Armstrong's wicked intentions, so could not pose and look their best. The composition is unconventional, simple and spontaneous, and the treatment of the theme very delightful. No data.

J. H. Saunders, our faithful English contributor, and winner of several prizes in PHOTO-ERA competitions, is very happy in the management of juvenile subjects, particularly when he succeeds in eliminating the element of self-consciousness that sometimes creeps into his pictures. The little boy, examining his curious "find"—a creature cast up on the sandy beach—see page 143—does not seem to betray the presence of the camerist, and forms a successful and pleasing genre. The technique is good, the scale of planes admirable, and the motive convincing. Data: July; afternoon; sunny; half-plate Reflex camera; 8¼-inch Aeroplane-lens; stop, F/11; 1/50 second; Imperial S. S. Ortho; enlarged on "Perfect" Bromide.

"Lovelace Brook," page 144, is a curious combination of a quiet, shallow stream and antediluvian rock. The view is situated near Tyler Hill, Pennsylvania, and the print was entered in a Beginners' competition, several years ago. The effect of light and shade is very striking and the effect produced quite impressive. The fragment of rock is the dominating object in the picture, therefore the total effect suffers slightly from the unavoidable bright reflection in the foreground. Data: August; 11 to 12 A.M.; bright light; 5 x 7 Poco; 7½-inch B. & L. R. R. lens; stop, U. S. 8; ½ second; 5 x 7 Kodoid; M. Q.; contact-print or Regular Royal Velox, redeveloped.

Advanced Workers' Competition

SPRING's warm and tender touch permeates every living thing; even the *blasé* human being is more or less affected by its irresistible influence. The spirit of spring kindles the fires of love, which suggest the appropriate theme pictured by Winn W. Davidson on page 149. Cupid has shot his dart, and that it has taken effect is proved by the story written in the faces of the congenial pair. The artist is to be complimented on his skill in arranging and lighting his models, and in securing the facial expression which is appropriately significant, and seems to presage an affirmative response from the young woman. The distribution of the light imparts character and fine technical quality to the figures, although one would wish that the trousers of the man and the stockings and shoes of his companion had not been so obscured. Also the perspective and the drawing are open to criticism—shortcomings that are due to the inadequate focal length of the lens used. Data: May, 2 P.M.; very bright light, but subject in shade; 5 x 7 Premo; 7-inch Zeiss convertible, shorter focus lens used on account of its greater speed; stop, U. S. 4; 1/5 second; Cramer Portrait Isonon; pyro-soda; contact-print on Artura Iris, Grade A.

How nature responds to the call of spring, the advent of the life and joy, as expressed in earth and sky, is portrayed in a landscape of supreme beauty, by P. Boetel, page 151. The picture is filled with the tender vernal spirit of budding spring, exquisite harmony and refined grace—so appropriate in a scene of this kind. The artist has met the demands of his task with commendable skill and artistic taste. Data: May, 3 P.M.; soft sunlight; 4 x 5 Cycle Graphic; 11-inch Protar; stop, F/22; K 2 color-screen; 1½ second; Wratten & Wainwright plate; pyro; 8 x 10 carbon enlargement, Italian green with Verito lens.

In his picture of two young boys succumbing to the call to go fishing, page 152, Mr. Louis F. Bucher has interpreted his theme with force and fidelity. The composition represents an original and thoroughly artistic design, spontaneous in feeling and creditable in performance. Data: August, afternoon, good light; Zeiss F/6.3 lens; 6½-inch focus; 1/25 second exposure; F/16; 3¼ x 5½ Standard Orthonon plate, developed in tank; pyro; enlarged on Royal Bromide.

Beginners' Competition

As explained several times, in this department, recognition is given to efforts of beginners that evince artistic promise combined with good technical ability. It is only reasonable to assume that they possess errors of commission and omission, and that the standard of excellence is not so high as that of the Advanced Workers. Making these allowances, we are prepared not to consider too critically entries in this competition.

The artistic motive in the "Wine-Vendor," page 155, is commendable; but, obviously, the treatment of the theme leaves much to be desired. The pose is a little awkward. Arms akimbo, as suggested in this picture, is seldom a graceful attitude, but significant and expressive in certain circumstances. The left arm would look better if left to hang by the side. In the absence of fitting surroundings, the young woman appears to be costumed for the occasion; her rôle of wine-vendor or *vivandière* is not to be taken seriously. The workmanship is not to be censured severely; it conforms to the rest. The lighting is too diffused and deprives the figure of force, vitality. Data: June, 2.30 P.M.; diffused light from window; made in large room with red background; Cooke series V lens, 9-inch focus; F/7; Exposure 1 second; Thornton-Pickard camera, 4¾ x 6½; Vulcan plate; developed in tray; adurol; print on Azo Hard.

"The Camp," page 157, comes very near being an artistic gem. The subject certainly lends itself to poetic interpretation; but the camerist, guided by artistic judgment will take care to get the most effective viewpoint, curtail the monotonous foreground, eliminate (it seems possible) intrusive objects at the right, and, with only slight changes, metamorphose the present picture into an attractive and faultless composition. Data: May, 1918; 11 A.M.; bright

(*Continued on page 166*)

ON THE GROUND-GLASS

WILFRED A. FRENCH

The Vandal-Camerist

It sometimes happens—though quite rarely, let us hope—that the camerist inadvertently damages another's property, when engaged in his pictorial activities, in which case he is naturally expected to indemnify the owner. Here is a case, however, where a camerist personally disfigured private property and through no fault of his, for I was an eye-witness to the incident. It was in the large semi-public park belonging to the estate of a well-known New York capitalist, on the Hudson. I had just finished photographing Conti's beautiful marble fountain, and was seated on a bench admiring the broad and well-kept lawn that lay stretched out before me. A care-taker was strolling nearby, keeping a sharp eye on the strangers who, like myself, were privileged to visit the park and admire, even sketch or photograph, its numerous artistic features. Soon I observed, not far away, a camerist with his tripod-equipment carried over his right shoulder deliberately crossing the lawn, his feet profaning its exquisite velvety surface. His object seemed to be the fountain which was situated directly behind the bench upon which I was seated. The care-taker had also noticed him, and stood still awaiting his approach. When the vandal, who appeared a little nearsighted, had come within about eight feet of the edge of the lawn, the vigilant functionary addressed him, revealing the rich, musical brogue of a true son of county Clare. "Phwat do yez mane by a trampin acrosht and a spilin the bootiful lahn?" he shouted at the bewildered camerist. "Couldn't yez be afther a radin' the soin in front av yez? Rade it now! Don't it say, 'Kape off the grass'?" The culprit stopped suddenly, stooped down and scrutinized his side of the sign which was facing the walk where I sat and where the indignant caretaker was standing, and then said: "I don't see anything, Sir. This side, here, has nothing on it," which was quite true. "Thin wahlk roight back to the other side, where yez eame from, and moind nivver to shtep on the lahn agin!" The hopeless camerist obeyed the stern mandate literally, and retraced his steps until he had reached the other side of the lawn, leaving behind him two long and disfiguring traeks.

The above-described incident reminds me of another, but more recent occurrence—the woman who balked the cross-cutters by putting up this sign: "This is a War-Garden. Walk across it and write yourself down a pro-German."

A Lesson in Practical Thrift

The necessity to economize has unlocked the secret chamber of expedients and makeshifts that will be found extremely useful in these days of stress. But it is doubtful whether in this varied collection of resorts will be found so ingenious a substitute for the modern flashbag (a contrivance that retains the smoke of ignited flashpowder) as a worn-out, cast-off umbrella—the skeleton-wreck that usually marks the rubbish-pile in a restricted locality ostentatiously labeled, "Dump no rubbish here." The photographer who has been driven to such a state of penury that he still treasures a dilapidated umbrella—unless he intends to consign it to the family ash-barrel or to present it to a wandering minstrel—will appreciate the resourceful mind that can convert it into a practical photographic accessory, *i.e.*, a flashbag and diffusing-screen for flashlight-work.

The process of transformation, as described by a European worker and elaborated by the Editor, is effected as follows: Replace the old, black material with white muslin; that is to say, cover the upper part from top of umbrella to outer rim of frame, likewise the lower or inner part as far as end of rod. Bring the material down taut, leaving the edges unstitched to allow a hand to reach in to open or close the umbrella. This yields a sufficiently large, enclosed smoke-chamber. The flashlamp, itself, is fastened with wire near the lower end of umbrella-rod. The lower part of the smoke-chamber is protected from descending particles of flashpowder by means of a circular piece of leather. The whole apparatus is then mounted on a suitable stand and at a convenient height. The muslin used is previously made fire-proof by soaking it for thirty minutes in the following solution:

Alum	2315 grains
Ammonium carbonate	725 "
Boric acid	432 "
Borax	509 "
Water	51 ounces

This solution will keep and may again be used for impregnating the muslin-covering.

A Fable for Critics of the War

The sole survivors of two wrecked ships lived on adjacent desert islands. After many years one of them managed to construct a catamaran and sailed over to the other island. He was met on the beach by Survivor No. 2. No. 2 took a look at the visitor, and then thoughtfully heaved a dolomite at him. No. 1 accepted the challenge, and replied with a similar bit of applied geology.

Then they fit all over the place.

After a while, exhausted, they stopped to rest.

A brilliant idea came to No. 1. "Why not," he said, "cease fighting, and help each other gather cocoanuts?"

No. 2 considered the proposition.

"Your idea has great Literary Merit," he replied. "But I am sure it is Impraetical. It sounds to me like only an Iridescent Dream."

"I guess you are right," sighed No. 1. "I have always heard that you can't change Human Nature, and that we must Face Facts, and not be misled by the Utopian Visions of Amiable Pacifists. But my idea did seem rather reasonable until we remembered all these things."

Then they went to it again; and very soon the sand-crabs were quarreling over their whitening bones.

H. C. T., New York Tribune.

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

Wanted: Pictures of German and Austrian Territory

Readers of Photo-Era who have made pictures of bridges, buildings, towns and localities now occupied by the German forces in France, Belgium and Luxemburg, also in that part of Germany west of the line running north and south through Hamburg, should send such photographs by parcel post or express to Col. A. B. Coxe, 1156 Fifteenth Street, Washington, D.C. Pictures of the Rhine and of towns situated along its course, and views in Austria, are also of value. The request from the War Department states that, "A large quantity of material is desired and may be sent without sorting or without any attempt to avoid duplication. It will not be practicable to return the material to the contributors." All persons who have toured the localities mentioned, should look through their collections of postcards and photographs for available material. This is another opportunity for loyal Americans to help win the war.

War-Work for You!

Who will help to furnish relaxation for our trench-tired soldiers in France? Who will give them a sight of home-scenes that will bring joy to their hearts?

You can have a real part in supplying the brand of recreation and relaxation that every man who has seen a bit of real fighting appreciates.

The National War-Work Council of the Y. M. C. A. asks every owner of lantern-slides who will, to box up the most interesting slides in his or her collection and send them at once, prepaid, to Mr. J. A. Rawson, Jr., National War-Work Council, Y. M. C. A., 347 Madison Ave., New York City, N.Y.

No one knows better than these Y. M. C. A. workers what the men in France want and should have. And when they ask for something that you can give, you can be sure that it is something our boys need and should have.

Every Y. M. C. A. hut in France—and we know they go right up to the front lines—offers every available means of amusement possible for the soldiers within its range. And it has been found that while the men like to sing and smoke and eat, the big hit is made when they can feast their eyes on a bit of their home-land. And every familiar American scene, from the Statue of Liberty to the Golden Gate, is home to our soldiers.

This isn't charity—it is plain duty. If you have in mind to go over your slides and pick out the culls; *don't do it!* Stop and think what our soldiers in France are doing for you—then decide whether or not they are entitled to the best you can give them. They are, without question.

Pick the cream of your lantern-slide collection and send it along. And if you haven't full sets, make them. Give every slide a title and, when possible, send a series that can be made into a picture-story.

Authors, editors, lecturers, travelers and newspaper-correspondents have volunteered to put the slides in order, index them and make them into travelogs or picture-stories that will make them of greatest interest to men in the hospitals, training-camps, billets just behind the lines or in the trench dugouts.

Virtually every Y. M. C. A. hut or tent or dugout has its lantern and can show slides when no other form of entertainment is possible.

Remember that the slides you send are food for the minds of as fine a lot of soldiers as ever manned a gun. Their nerves are shattered, their bodies weary after long hours of trench-duty, and they must relax. Nothing sets them right so quickly, fills them with the fighting spirit and makes them so fit and eager as picture glimpses of home.

Help our boys pack up their troubles—pack up your slides—the best of them—and send them to the address above. A million or more of our boys will enjoy them and will bless you. Enclose a note with each shipment of slides, stating by whom they are sent, and do it now. The sooner the slides are received, the more good they will do.

The Work of John Paul Edwards

One of the most attractive exhibits of pictorial photography ever seen in Boston is by John Paul Edwards, of Sacramento, California. As the exhibit won unstinted praise from the local art-critics, it may be well to reprint the opinion of William Howe Downes, art-editor of the Boston *Evening Transcript.*

"One of the most admirable collections of photographs that has been shown in Boston for years is now to be seen at the gallery of Charles E. Cobb, 454 Boylston Street. This is the work of Mr. John Paul Edwards, of Sacramento, Cal. He is an artist-photographer of the first rank, and his prints have been exhibited in the principal salons of Europe and America, and have received the most unqualified praise from artists and connoisseurs. If there is such a thing as imagination in a photograph—which is an idea that would have been laughed at only a few years ago—surely Mr. Edwards's prints manifest this element in the most unmistakable manner. Yet they are photographs, and do not try to look like anything else. They have invention, the dramatic note, and in some instances what we must venture to call lyricism.

As a picture, the print entitled 'The Waterfront, Sacramento' (35), would be entitled to the first prize in any competition, it is so complete, so original, and so perfect in a technical sense. Yet the materials of which it is made are strictly ordinary; it is all in the way the thing is made. The vista of the river is closed in the distance by a very commonplace steel bridge. In the foreground is a tug-boat with two barges. At the right, the shore is in shadow and a tree on a bluff rises against the sky, which is of a luminous silvery gray tone. No description, however, conveys anything more than a very inadequate and dim idea of the charm and beauty of this rare piece of work, of its pleasant atmosphere and its happy silvery tone, subtle and delicate, of the piquancy of its design and the beauty of its blacks. We have seen many a high-priced etching which did not possess half of the intrinsic artistic sentiment of this beautiful print.

Another noteworthy example of Mr. Edwards's

work is the picture which he calls 'The Strollers' (34). This is a California beach subject, with two figures of girls walking in the foreground, and they are really walking, not merely going through the motions for the benefit of the camera-man. In the distance is a wooded height coming down to the sea which supplies an impressive and handsome horizon-line, somewhat blurred by a thin sea-fog. The slender figures of the two girls on the beach are placed very felicitously in the design, and their freedom of self-consciousness is refreshing. This is one of the most successful combinations of landscape and figure work in photography that we have seen. He exhibits also some straight landscapes, objective enough for anybody, and excellently made, such as 'The Mount of Tamalpais' (26) and 'The Dunes of El Carmel' (17); and two portraits, those of William Ritschel and 'Uncle Silas.'"

Notable examples of Mr. Edwards's work will appear in PHOTO-ERA from time to time, commencing with the October issue.

Photo-Materials to be Taxed

OUR editorial on the revenue-measure soon to be introduced by Congress, has been anticipated by an editorial in this issue. The English pictorial workers are naturally opposed to such a measure and have explained their reasons for believing it to be unwise.

But this administration needs money and it can be obtained only through taxation and the sale of Liberty Bonds. This is no time for us to find fault, even though certain taxes may seem unjust. There is no discrimination in favor of any section of the country, for it hits the photographer, professional and amateur alike, in whatever part of the country he is active.

We understand that the Committee on Ways and Means proposes to levy a tax of ten per cent on cameras, dryplates and films; but whether upon other photographic materials, will develop later. This tax is wholly apart from the tax on motion-picture films, etc., and other manufacturing products.

Let us all comply cheerfully, because this means to help win the war. One of the results of this tax will be a more intelligent and economic use of materials by professionals and amateurs alike. There has been much waste in the professional studio, when the proprietor was not looking or when he knew little or nothing of the business. This is going to be curtailed. Amateurs should likewise take the cue; for by studying all the conditions that contribute to the making of a successful picture, they get along with fewer exposures, and less time and energy. All this tells, and will help to beat the enemy.

William S. Davis—Painter-Photographer

WHEN readers of PHOTO-ERA MAGAZINE miss an occasional article from the practical and helpful pen of William S. Davis, it is because this versatile artist and writer has abandoned, temporarily, the pen in favor of painting a series of Naval-Battles of the world for the U. S. Government, to be followed by a set of paintings of Famous Ships of many periods associated mainly with American history. Both sets will be reproduced in full color. Mr. Davis has painted, and donated for "W. S. S." publicity-work, a poster in oil, and another for the "U. S. Shipping-Board." Generally, orders from this source are profitable. We are all glad for the opportunity accorded to Mr. Davis, who is as good a painter of marine-subjects as he is marine-photographer.

Mr. Davis has also managed to find time to etch a large and superb plate for one of the leading art-dealers, who is preparing a circulating exhibition of etchings relating to the war, showing a battle-ship division at sea. This exhibition will also be seen at all the cantonments, military camps and Y. M. C. A. military centers. Good luck to him!

W. H. Rabe's Artistry

MR. W. H. RABE, prints from whose artistic portfolio have appeared in these pages, from time to time, is exhibiting a collection of his interesting photographs at the Art-Gallery, in Portland, Maine, beginning with September 1, 1918.

The London Salon of Photography, 1918

THE London Salon of Photography of 1918 will be held at the Galleries of the Royal Society of Painters in Water-Colors, 5a Pall Mall East, London, from September 14 to October 12, 1918, inclusive. Unfortunately, copies of the conditions of entry were received too late for August PHOTO-ERA. The last day for receiving pictures at the gallery is Tuesday, September 3; and, in consequence, a detailed statement of regulations governing the salon is of little value, at this time.

The Second International Photographic Salon, January 3 to 31, 1919

THE Second International Photographic Salon, under the auspices of The Camera Pictorialists of Los Angeles, will be held in the Gallery of Fine and Applied Arts, Museum of History, Science and Art, Exposition Park, Los Angeles, California, January 3 to 31, 1919. The last day for receiving prints will be Saturday, November 30, 1918. Conditions of entry, and other particulars, may be obtained from Mr. Ernest Williams, Secretary, Room 31, Walker Auditorium, Los Angeles, California.

Our Illustrations

(*Continued from page 163*)

light; 2¼ x 3¼ Graflex; 4½-inch Tessar Ic; stop, F/8; 1/35 second; Eastman film; M. Q.; enlarged print on Studio Cyko Enlarging.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is, "The Study-Hour" by Chas. A. Hughes. To assist at a better understanding of the composition, the following data are supplied: March, 2 P.M.; bright light, indoors against light of window; 5 x 7 Montauk; R. R. lens 8-inch focus; stop F/11; 15 seconds exposure; Stanley plate; metol-Hydro; enlarged on Azo E Hard medium.

No Limit to an Honest Enterprise

IT is reported that a firm to manufacture cameras has been incorporated in a western city, the capital stock being $2500. The amount is not large, but then—

"Tall oaks from little acorns grow"

or, "They shall reap what they shall sow."

LONDON LETTER

CARINE AND WILL CADBY

The Photographic Convention of the United Kingdom held its meeting, this year, in London, on July 5. By a happy inspiration, Kew Gardens was chosen as a rendezvous and, although after the long spell of drought, there were fears of the weather breaking before then, luck was with the convention; it held on, and last Friday was as fine a day as we have been having for the last six weeks.

The Convention was naturally not so largely attended as in its palmy pre-war days, when it visited not only Scotland, Wales and Belgium, but enjoyed a whole week of lectures and festivities; yet it is going on with its one-day meeting and hoping for more extended opportunities and travel, after the war. There used to be a charm attached to the very word, travel, and the idea of change obtained with ease and interest was an attractive one; but now the railway-companies are doing their best to convince people that, "go East, go West; to stay at home, is best." To such inconveniences, delays and hardships do they subject their passengers.

Mr. Arbuthnot's exhibition, at the Camera Club, had as many visitors as could be expected when London is almost as filled with shows, as in pre-war time. It seems now that people, like Augustus John, Orpen, Nevinson, and others, go out to France, see some active service, and come home with some military rank and open an exhibition of their paintings. The popularity of all these shows has been astonishing, and one cannot help thinking that if it had been "Major" Arbuthnot, who had exhibited at the Camera Club, there would have been the usual stampede to gain admission. But those who visited Mr. Arbuthnot's show were well rewarded. His work is big, and true, and convincing, in spite of the compromise of professionalism. One would like to be able to assert that his portraits rise superior to the taint of "what the sitter expects"; but one has to confess that, although it is very subtle and disguised—and Mr. Arbuthnot is remarkably clever in seeing what is really the best point of view of his sitters—they are not all as he would have represented them had their satisfaction not come into his calculations. Still, Mr. Arbuthnot is successful, and had he been ruthless he would have been a failure as a professional photographer and, after all, most of us worship success.

In a recent article, H. G. Wells—under the title of "A German Delusion"—discussed among other things the Allies' present and prospective independence of Germany as regards photographic chemicals and optical glass. With regard to both, he gives a very cheering account and contends that, although formerly Germany had a monopoly of optical glass, not only because of her high technical organization, but through her control of pure potash, now the tables are turned. Deposits of potash have been found in Spain, Abyssinia, Nebraska, Wyoming, Saskatchewan, Portugal and Brazil. Besides this, we have new methods to obtain it from felspar, and the old kelp-burning methods have been revived under favorable conditions in Florida. Mr. Wells goes on to assert that "present-day British optical glass excels any German product and, unless Germany also has made great strides during the war, she will find her old methods of manufacture altogether out of date when, at last, she is able to take up competition again."

Of course, if true, this is of absorbing interest to all photographers, on both sides of the Atlantic; for it concerns directly photographic lenses, and foreshadows the time—if, indeed, it is not here already—when the name of the town of Jena will no longer be a word to conjure with, and keen photographers, determined to have the very best article, will not want to ask for German lenses.

We are getting a goodly number of photographs of American subjects reproduced in our picture-papers, just now. Indeed, the United States is more in evidence than ever it was before, all over the country. Incidentally, this was brought home to one of the present writers when, as Special Constable, he guarded a lonely and out-of-the-way bridge from midnight till dawn, while American troop-trains passed down to the coast. Standing, watching the long closely loaded strings of carriages—sufficiently illuminated to make it possible to distinguish individual men as they slowly passed by, many sleeping, but some looking out on the moon-lit Kentish landscape—he longed for a moment's chat with these pioneers, the very tip of the spear-head that eventually is to save the European situation!

But to return to the illustrated papers. The camera tells its tale far better and more convincingly than the cleverest of pens. We have seen lately some good reproductions of Americans in training, and one notices at once their well-set-up appearance and their fine physical development. Much more satisfying are these little prints than thousands of flowing, eulogistic words, or the ablest efforts of the draughtsman, be he ever so skilled. One scans the faces of the training multitude depicted faithfully by the halftone-block, and one is struck by the family-likeness, so to speak, that pervades them all. "They are obviously Americans!" we exclaim with our insular point of view. And if we were asked to explain just what to our minds constituted an American stamp of face, we should say that, in some way, it must appear to resemble, or to be variations of, the many portraits of the President that have been seen lately in such large numbers in the shop-windows, here. As represented, his face seems typical of our idea of the national features. Wonderful country that, out of so varied a stock of material can so soon evolve a type, and such a good one! To a visitor from Mars, there would probably seem little difference between the features of men from the States, Canadians, Australians, New-Zealanders, or even home-bred Englishmen; but he would be able to detect easily the dissimilarity between these, collectively, and a Prussian. But just as we, in this country, are growing more and more to quote the war-aims, as expressed by President Wilson in voicing our ideas on that important subject, so we are coming to look on the American stamp of face as the central type of the big family of nations, varying, yet in the main alike, of the English-speaking peoples scattered all over the world. But this is not purely photography, although it was photography that led us to the fascinating subject.

WITH THE TRADE

A New Photo-Enlarging Shop

James C. Kerwin, for many years the technical expert of the photo-finishing department of a well-known photo-supply house of Boston, U.S.A., has purchased the business and technical equipment of George B. King, commercial photographer, at 367 Boylston Street, Boston, and will make a specialty of photo-enlarging and kindred work that requires the highest degree of technical skill.

Mr. King will resume business in commercial work, at Bar Harbor, Mount Desert, Maine. Being the official photographer of the Sieurs de Monts National Park, established on Mt. Desert Island, Mr. King will be kept busy, indeed.

"Photomicrography"

We have received the booklet, "Photomicrography," issued by the Eastman Kodak Company. It is now in its fourth edition and recently revised. It is a thorough introduction to photography with the microscope. Copies may be obtained from the Eastman Kodak Company, Rochester, New York, by forwarding 15 cents in stamps.

Bass Camera Co. Reports Increased Business

We are informed by the Bass Camera Company, 109 North Dearborn Street, Chicago, that, despite the shortage of skilled labor, its business has increased one hundred per cent over last year. The company takes the opportunity to call attention to the shortage of staple photographic articles due to the tremendous demands that the Government is making on all photo-supply manufacturers and dealers. This has been responsible for a few delays in shipping certain grades of paper and in filling orders promptly. We believe that camera-users generally will appreciate the existing situation and in consequence will not censure manufacturers and dealers too hastily when shipments are delayed.

British Optical Glass

Speaking of the success in obtaining optical glass *The Amateur Photographer* says that the development of home-resources to compensate for the cutting off of foreign supplies owing to the war, forms a scientific romance of which we have every reason to be proud. In no department perhaps were we so dependent upon Germany, prior to 1914, as in the optical glass-industry. For some reason it never occurred to us that we could do as well, if not better, than the Germans if we tried, and Jena glass thus obtained a world-wide fame and monopoly which might never have been challenged if peace had remained unbroken. With the outbreak of war, however, the immediate necessities of the army and navy for optical munitions made it necessary to move heaven and earth to get the glass required for telescopes, binoculars, camera-lenses, etc. The energetic action of the Department of Optical Munitions and Glassware-Supply has performed marvels in this direction and laid the foundation upon which in the future if we care we may make ourselves independent of foreign optical glass. Not the least important step towards that most satisfactory consummation has been taken by Dr. P. G. H. Boswell who has undertaken an exhaustive study of the British resources in sands suitable for glass-making on behalf of the Ministry of Munitions. Dr. Boswell's researches have resulted in the discovery of some valuable sand-deposits in various parts of this country, but especially in the neighborhood of Aylesbury. He has also ascertained some important data regarding the properties necessary in the sand used in order to produce the best glass from an optical point of view.

Lent Cameras

We know a druggist in a Western city who is making a killing, lending cameras to his customers and prospective customers. This shrewd merchant bought 100 of the latest model "picture-takers" in various sizes and advertised liberally in the following brief manner: "Everybody likes to take pictures, but everybody can't afford to have a camera. Any time you feel like taking some pictures, just come over to my store and I will lend you, absolutely free, any size camera you wish. Naturally, I can let you have this camera only for a day or two, because I have such insistent calls for it all the time. Of course, I anticipate that you will purchase your films here and let me develop and make prints for you, for which the charge is nominal. It won't cost you a cent to secure the loan of a camera, and you are not compelled to make purchases to secure the loan." Besides the profit this druggist makes in developing and printing, he gets the intense good-will of every borrower, and through this simple method he has built up in his neighborhood a wonderful trade in the Kodak-department. The initial expense of purchasing the camera is, of course, quite high, but the original supply need not be made large, and once the equipment is complete the ensuing profit is all "meat." Cameras never wear out and the trade always increases. Some idea, what do you think? Will you try it out?—*Novelty News.*

Unpalatable Truth

Sanderson was on a visit to Simpkins, and in due course, naturally, he was shown the family-album.

"Yes," said Simpkins, as he turned the leaves, "that's my wife's second cousin's Aunt Susan. And that's Cousin James and that's a friend of ours and that—or, now who do you think that is?"

"Don't know," said Sanderson.

"Well, that's my wife's first husband, my boy."

"Great Scott! What a perfect brainless-looking idiot. But excuse me, old fellow, I didn't know your wife was a widow when you married her."

"She wasn't," said Simpkins, stiffly. "That, sir, is a portrait of myself at the age of 20."—*Tit-Bits.*

The difference between photo-finishing and amateur-finishing is that the former consists in finishing the amateur's film, and the latter in finishing the amateur, himself. —W. A. F.

PHOTO-ERA

The American Journal of Photography

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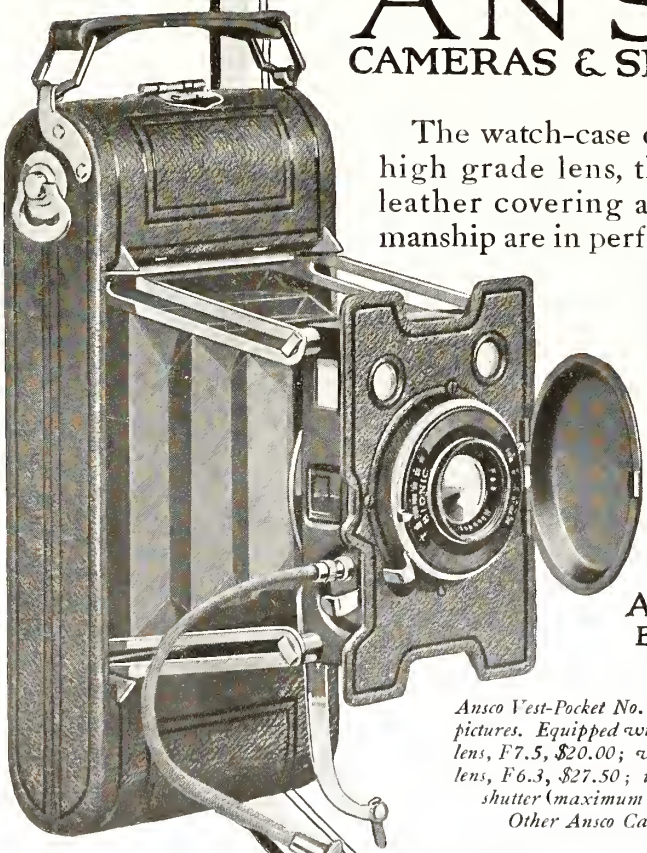


OCTOBER 1918 20 CENTS

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PHOTO-ERA

The American Journal of Photography

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Craft and Art in Amateur Photography

EDOUARD C. KOPP

I MET the old rancher near "The Sentinel." The river lay below us. Looking south, we could see its silvery length meander until it lost itself in its own tortuous curves in the distant valley, which lay closely-guarded by Mt. Lookout on the east and Red Mountain on the west. Far away, fully thirteen miles, in lavender mists and snow, old Sopris kept careful watch.

"Art-photographs?" he asked almost contemptuously; then continued: "You used to see this place lined up with easels, years ago. Every young lady in the country painted this scene. And Lordy! how they did paint it! They called it art, but—well, maybe I didn't understand. But now, all you see is cameras. And I'm not sure that they do much better. Such whites and blacks! Them good old hills ain't so harsh as folks make 'em out to be. But maybe I don't understand—don't understand." And the old fellow walked off muttering to himself and left me gazing through my ground-glass, while the breeze flapped my focusing-cloth about my head.

The old man was right! The many artists of other days—and I use the term "artists" very broadly to designate those who paint and draw, regardless of the intrinsically artistic merit of their work—the many amateur-sketchers and watercolorists were untrained and did make poor pictures; but so does the untrained amateur-photographer of to-day make poor pictures. The untrained artist had not the technique to put upon canvas an artistic creation, and the untrained photographer has not the technique to put upon printing-paper an artistic creation. He cannot transpose to monochrome the truth of the plain scene before him, much less impart his personality—he does not know how!

Nowadays, almost everybody photographs. That is, he possesses a camera, makes exposures and, finally, obtains a photographic reproduction—good or bad—of the subject he had before his lens. Of course there are photographers and *photographers*. There are those whose sole ambition is to "snap" things. They have taken to heart the slogan of some photo-finishing houses: "You press the button; we do the rest!" Then, there are those who do their own finishing; but who have little more interest in the work than the foregoing snap-shooters, since it is prompted by the mere reason that they can work a bit cheaper than they can have people work for them; their interest in finishing is financial rather than artistic or even photographic. But, lastly, there are those whose aim it is to make good pictures. And it is to this class that I address this article, for it is to them that we must look for the future of photography. However, it is not my present purpose to exhort them to worship at the shrine of art—although the future must accept photography as an art if it is to live as an intrinsic part of our daily lives and an influence for good.

The present tendency is to insist most passionately on the *art* of the photograph. The eye of the amateur is assailed on every hand by notices of the high calling of his hobby. If it is not in a magazine-article, it is in a book; or, perhaps, in an exhibition of "art-photography." Now, I grant, if you will, that pictorial photography and art are so closely related that the photograph easily becomes art. But I contend that the exaggeration of the art-side of photography is not always best for the novice. What would I have? I would insist on viewing photography primarily as a craft, but one capable of being converted into an art.

To photograph, as the average individual photographs, is almost purely a matter of guesswork and luck. He focuses in the general direction of the subject that he wishes to reproduce—and I mean here, exactly what I say. There is

usually but one best place from which a picture may be made—rarely two points which will yield equally satisfactory results—and that place must be found by diligent search and experiment. Yet, watch your tyro. He comes up on the run. "That looks *pretty*—abominable expression—doesn't it?" he calls. Next, he sets up his tripod wherever he happens to stop, if, indeed, he owns such a thing, or stands rooted to the spot if he doesn't.

"I *guess* a fiftieth of a second ought to be about right," he observes, but waits for no answer; snaps his picture, and has hurried on to newer scenes before you have recovered from your first look full of appreciation at what lay before you.

Then he develops his plate with a ready-made developer, the composition of which he is entirely ignorant of; takes his plate from the solutions with the remark, "I *think* that is about enough"; "hypos" it, washes it, dries it, all by guesswork, and his plate is ready for printing—if, indeed, he is fortunate enough to have any image at all on the emulsion. The printing-process is much a duplicate of the plate-developing—just as generally inaccurate. It is, "I *suppose* three seconds will be long enough to print this," and, "These prints *ought* to have been in the water long enough." But never once in all the manipulation does he say, "*I know!*"

Since art is the systematic application of knowledge or skill in the accomplishment of a desired result, it follows that photography—as practiced by the average individual—has no just claim to be called art. But art, as we think of the term applied to painting, to drawing, to etching and, more recently, to photography, supposes an intellectual and emotional creative faculty beyond mere knowledge and skill. It is a faculty which must come entirely from within the man, for it is one that no amount of study or instruction can impart. And just that is the heart-breaking thing about art. The most cursory canvass of art-schools will show that there are many pupils who have the capacity and the willingness to learn; who develop great dexterity in the mechanical and theoretical branches of art, but who lack the spark divine, and consequently become painters, yes; but artists, never. It is obvious, then, that every man cannot become an artist. But there is one thing he can become, unless he is entirely abnormal in his characteristics. He can become a craftsman. The epithet is not one to be despised. To be a good craftsman is far preferable to being a poor artist. William Morris has demonstrated that virtually every man can become an artisan, and that if he will but direct his attention perseveringly he can develop into a creditable craftsman. But, thus far, no one has developed any system whereby an artist can be made by exertion of effort.

I mean, therefore, to urge the amateur to strive for craftsmanship in photography. The title is not so exalted as is that of "artist," it is true; but by aiming at perfect mastery of technique he will gain much and, rest assured, if the creative faculty and the vigorous imagination are within him he will not long remain the larval craftsman, but will be metamorphosed into the full artist; and with the technical training he has gained from his apprenticeship to the craft will be free to realize the visions he sees, for he will fully understand the use of the necessary means to achieve his ends.

The average photographic amateur, if he takes himself and his hobby at all seriously—and it is such that I shall always mean when I refer to the amateur—endeavors to produce artistic pictures. I do not mean to imply that he has the creative faculty of a necessity—although he usually appears to believe that the cloak of Raphael has descended on his shoulders—but that he appreciates the better pictures and endeavors to fashion his own production after the results achieved by the recognized masters of photographic art: Keighly, Mortimer, Arbuthnot, Demachy, and others. However, he is hampered in the realization of his pictorial desires very largely by the lack of an adequate mechanical technique. And I am not sure entirely that this is altogether his own fault. On every hand he is assailed by an advertisement that tells him how easy it is to master photographic technique when the advertised article is used. It may be a developing-tank, a new developer, a printing-box, or one of the hundreds of other photographic articles on the market. I do not mean to appear to disparage or to brand as dishonest these articles—since the fact remains that they do make the technique easy—that is, results of a certain standard can be attained easily by the tyro.

But it is in this very apparent simplicity that the danger lies. The advertisements are so convincingly worded that who can help being caught by them? The results are legitimate, as I have said. Wherein, then, is the danger? It is *too* easy! that is the danger. The amateur grows satisfied with just so much as he can get thus easily. He seeks to enhance the merit of his output by better lenses, better cameras, better tools throughout, but he does not study how he can get the greatest good out of those tools; he fails to add the one thing which will



"ONLY YESTERDAY" LEJAREN À HILLER

lay the real groundwork of his hobby as an art. He multiplies accessories, but fails to put into his bread of art the leavening of solid knowledge.

There are few things worth while which can be gained except by a certain amount of drudgery. Most of us dislike drudgery; the photographic amateur no less than anyone else. And yet it is the fact that those who rise to preeminence in an art, a craft, a profession, in anything worth while, are those most persistent in drudgery. We are astounded at the art of a great musician. We speak of his genius, his inspiration, his talent, his everything that is intangible and above the clouds; but how seldom do we hear anyone speak of his drudgery, the hours upon hours that he sat at his task, day after day, from earliest childhood, the thing that made him, that proved the foundation whereon he could build the magnificent edifice which made him an artist!

But, you may say, the musician's playing is no hobby; a man cannot be expected to *work* at a hobby. Well, that all depends on the man! Some very fine musicians commenced their artistic careers as amateurs. Let us look at a different hobby, one that few men enter professionally but that many practice for their own delight: revolver-shooting. I am acquainted with a remarkably clever revolver expert who shoots purely as a hobby, and yet he practices as diligently and as conscientiously as though his life-work depended upon it. By nature he is not a studious man, yet he has made himself an authority in ballistics and trajectory and all the nice theoretical things closely related to shooting. In short, he is not afraid of drudgery.

There is much of this drudgery in photography. What I mean is that there is much which might appear foreign to what an amateur thinks he ought to know to make good pictures. An amateur once asked me, "Why should I weigh out my own chemicals?" And I told him that

he could thereby gain a clearer perception of what constituted a developer, and a greater control over his negatives and prints. Then he asked me why he should burden his mind with the chemistry of photography when all he had to do was to step to the nearest drug-store and purchase, ready for use, all the things he might need. When I told him that he must know some of the chemistry and the optics of photography, and that he should know perspective and a few other subjects if he would be a good craftsman, he answered me:

"Well, I am not in this hobby to be a craftsman; I took it up because I have a love of art, and want to make artistic pictures."

Go to! thought I, you do not love art in reverence if you are not willing to work for her.

His worship of art reminded me of the worship of God we often see in our churches. It is an ostentatious worship; one put on, like the Sunday walking-coat, to be paraded on the boulevard of a fine morning. It is but a cloak and for our neighbors' notice. But should that worship ask any sacrifice, anything—well, inconvenient to our comfort, we immediately find an excuse. And the sad thing is that, as the years roll along, we see more and more of this superficial worship. It is the worship which fills the churches on a beautiful Easter morning, but leaves empty pews to stare the sorrowing pastor out of countenance the following Sunday morning when the walks are wet and the sky leaden. And the spirit that prompts superficiality and ostentation in religion is not one to foster profundity of artistic study and worship; for true art demands reverence and depth of love no less positively than does God, since all true art is founded in good.

It may appear like piling unnecessary difficulties upon the amateur to ask him to learn the chemistry of photography. He will probably say that for the few pictures he takes the effort is disproportionately great to the benefit he would derive. Of that, naturally, he must himself be the judge. But if he is not willing to go the length of doing a little drudgery, let him at once and honestly renounce pretence of being an artist.

Since he usually takes up photography without more personal instruction than his equally uninstructed friends can give and he digs out his bits of knowledge by himself, he will, no doubt, find it no easy matter to master the chemistry required. Chemical equations—unless one has a special aptitude and some previous training—have a tendency to get badly mixed up without the aid of someone to say thus and so! to direct the focus of the mind so that it can see the point of the problem. Then, too, with a kitchen-table, a sink, and a few bottles as our sole laboratory it is difficult to get the full good of experiment from our array of chlorides and nitrates and sulphites and bromides, or even to comprehend their essential differences and likes. But the effort should be made. Fabre taught himself chemistry and analytic algebra, and though few of us have the ability or the perseverance of a Fabre, most of us have such powers as would quite astonish us if we were really to study with a will and an aim.

The amateur-photographer is not urged to make himself a master-chemist; that is unnecessary. But he should study the chemistry which applies to the work he has undertaken, so that he need not guess, but will know just what effect any given developer will have upon the silver salts of his plate or his paper; that he can predict with certainty whether he must add more sulphite or carbonate, whether it is best to use a single or a compound developer to ensure the result he desires. When the amateur has made himself familiar with the affinities of the various chemical compounds used in photography, and their reactions under various conditions, he knows what to expect and, consequently, works with authority. Given then, a desired result he can predetermine just how it may best be attained. He has made a definite step toward artistry when he has gained specific knowledge.

But it must not be thought that a knowledge of chemistry alone will be sufficient. That will take care only of the chemical part of the work. There is the optical part, the knowledge of lenses and light, which is no less necessary. The photographer must know just as thoroughly the effect of any given lens on his work as he must know the effect of any given chemical on the plate later. And he must make himself scientifically familiar with exposures and the reasons for exposures. In other words, he must know why with one lens and stop he needs an exposure of a hundredth of a second and why with another he needs a half second; why one lens gives him hard lines and another gives him softness; why one suffers from astigmatism and another does not, and so on. The mathematics of optics are exceedingly difficult and I would not be thought to insist that the student master them in their entirety. All I suggest is that he make himself familiar with those phases of light, of refraction, or reflection, which have to do with photography. I would not have him study optics so that he can invent new lenses, but that he can comprehend thoroughly the possibilities of the lens he owns. He must



SUNDAY MORNING ON THE RIVER
JOHN PAUL EDWARDS



BELLA DONNA JOHN H. STOCKDALE

make his hobby a science first, if he would make it an art later.

The painter does not begin his career by endeavoring to produce a work of art before he can draw a cube or a rhomb. And yet it is just this which the photographic amateur usually does. Before he can make a creditable photograph of a book beside an ink-well, or of a barn; before he has learned thoroughly how to focus his camera, he tries to make intricate compositions that involve the greatest niceties of exposure and chiaroscuro. The consequence is that he does not guess correctly! His exposure is faulty, and his chemical knowledge unequal to the task of bringing the best values out should he accidentally strike an approximately correct exposure. His plate is only a record of his own incompetence. Sad as it may seem, he often learns no lesson from his failure, but persists in his ignorance, blaming everything from God's own sun in the heavens to the tap water, excepting alone himself.

The photographer's indifference to basic principles is akin to that of the writer who does not study literature or read much lest his works bear the influence of another. This is all rubbish! An art not founded deeply in the solid earth of craftsmanship; the mechanical, the intellectual technique of that art, cannot stand. Having attained proficiency in technique, the amateur is ready to enter seriously the field of art. But let him study his art even as he before studied his science: intensely. Let him study perspective and the principles that govern it; let him study chiaroscuro, the balance of lights and shadows; let him study lines and composition. Let him go to the great artists for his art; to Michelangelo, to Titian, to Turner, to Landseer; and let him go to the writings of those in authority; to Reynolds,

to Da Vinci, to Ruskin, to Fuseli, for the development of his critical discernment.

And, lastly, when he has mastered the technique of his craft, when he has mastered the teachings of his art, let him give expression to the creative faculty within him. As Ruskin advises the young painter not to seek to *invent* new expressions in painting, but to let such expressions be the *natural* outburst of emotion and healthy imagination, so would I advise the young photographer not to seek to invent new expressions, but so to express himself that the message he bears will be the spontaneous outburst of his inner self; the expression of an artistic imagination governed by knowledge and sound technique. Then, and not until then, will he be an artist in the true and universally accepted meaning of the word.

Proe and Kahn on Soft-Focus Lenses

AUGUST KRUG

PROE came out of the darkroom with an expression on his face which can best be described as quietly triumphant. He held a dripping plate to the opal-shielded light and squinted at it through half-closed eyes as he had seen art-critics do. "Look at this, will you?" he cried.

Kahn, out in the library, heard him and laid aside the magazine he was reading. "What are you up to now?" he queried; then, catching sight of the plate in Proe's fingers, "fuzzy work, eh?"

"Right! This is the first plate I have made with my new soft-focus lens. What do you think of it?"

"I think you will have a bad case of frilling if you don't hustle that plate back into the hypo. When you come out, we'll talk it over."

Proe obeyed with a sinking feeling. Was Kahn going to rip his new notion up the back, as had happened before? Proe had been a picture-making amateur for a short time only: his connection with the camera-club had been for an even briefer period; still, he had produced a few good pictures, and felt entitled to form opinions of his own. Kahn had white hair, and was a photographer when Proe entered this world; but secretly Proe deemed him unprogressive. New blood was what photography needed, and he thought that a lot of it flowed through his own veins.

Kahn was awaiting him, and led the way to the reception-room. It was unoccupied, and they made themselves comfortable in one corner.

"So you have bought a soft-focus lens, have you?" Kahn began. "I suppose that you will begin to make Salon prizes at once."

"Well, hardly," laughed Proe. "You see, there is such a lot of things I have to learn."

"Good boy!" approved his friend. "A little modesty never hurt anyone. But are you of the opinion that a soft-focus lens will help you on the road to Salon success?"

"Oh, unquestionably!" replied Proe. "Why, every picture made with a lens of that type teems with mystery and suggestiveness. It lends a charm even to the commonplace. You must admit that the quality of its image is—for artistic purposes—superior to that of the anastigmat."

Kahn looked dubious. "Well, I will admit," he said, "that I have seen pictures made with soft-focus lenses that created within me a feeling of mystery. But—with a big *but*—I refuse to acknowledge that every picture of that kind awakens that feeling. Most users do not know how to get the best results from their lenses, and it would make little difference if they did. Nowadays, the subject of a photograph is thought rather unimportant, so long as the technique is good. I may be old-fashioned; but I contend that this is wrong. A picture ought to have a reason for being. Why waste time, plates and patience on something not worth shucks? People take indistinct photographs, in the belief that indistinctness is the same as mystery. To me, my boy, the only mystery is, 'Where on earth do they get the nerve to show that stuff as artistic photography!'"

Proe was annoyed, and showed it as he answered shortly, "That's as the eye sees it, you know!"

"I think that's bunk!" said Kahn quite frankly. "I believe that anyone who sees things that way ought to have his vision corrected by the combined efforts of oculist and optician. Maybe the thing is too deep-seated and can be helped only by an alienist or—but come! I do not want to wound your feelings. I have heard that saying so often that it gets on my nerves. It has been said so often that it has become a

truth to be reckoned with, like an axiom in mathematics. Although true enough at first, the meaning has been so perverted by succeeding photographers that it no longer holds good. For instance, I can see very clearly and distinctly the figures on that small calendar, over there. A typical soft-focus view of it would show it as a rectangular blur, and you would find it a hard task to state definitely, from the photograph, just what it was."

"But one would not want to make a mystery picture of that calendar," protested Proe.

"Ah, there you have the solution of the problem. One should think of his soft-focus lens as a special implement, such as a vignetter, ray-filter or tripod, to be used only as the occasion warrants. To photograph an uninteresting subject with a special lens—thinking thereby to glorify it and to make a picture of it—is to vilify the name of Art which you profess to revere. You are trying merely to pull the wool over the eyes of the people to whom you show your effort. You are, in a limited sense, dishonest. Of course, I cheerfully concede that the soft-focus lens is an excellent tool for the pictorialist. The mistake, I contend, lies in using it for everything and anything. It should not be forgotten that a soft-focus lens is not a necessity in pictorial work of the very highest order. Originality and a rapid rectilinear are far better than any amount of artificial murk."

"Of course, you are right about choice of subjects," said Proe, eager to clear himself. He vowed not to show the rest of the plates he had exposed. "But I still think that a soft-focus lens is the best kind for landscapes and portraits."

"Within limits," assented Kahn. "Suppose you have a landscape with light clouds in a light sky which you wish to render with your pictorial lens. Of course, you use a deep filter and color-corrected plates; but what will become of your softness of focus? You will get a sharp image, I am afraid. Why, the anastigmat with diffusing-adjustment will get you more softness under those conditions."

"Is that so? I had intended to make some three-color negatives with the lens for experimenting in gum. From what you say, I gather that it would not be suitable."

"Hardly. Possible, of course; but not practical. Better use a sharp-focus lens. Gum will give you enough breadth without getting more with the lens."

"That's it!" cried Proe. "That's the word I've been trying to think of! Breadth! A soft lens is the best way to get that quality."

"It is a way, most certainly; as to its being the best, circumstance alone can be the judge. With an anastigmat, you can focus sharply upon your principal object and have the rest out of focus and subordinate. The subordination can be increased or decreased at will, merely by opening up or stopping down your lens. With soft-focus lenses, this is true in a measure; but the control is not so great as with the anastigmat. And again, with a sharp-focus lens an image of an object is either sharp or unsharp, and it takes very little training to distinguish between the two. However, with a soft-focus lens you have three qualities of diffusion, of infinitely varying degrees, and blessed is he who thoroughly understands it. I do not."

"I'm learning all the time," said Proe. "How is it there is so much to a soft-focus lens all of which I did not suspect when I bought mine?"

"It all depends on the principle on which most of them work—chromatic aberration. I'll explain. Have you ever looked through a cheap opera-glass and noticed that the object you were looking at appeared fringed with color, blue on one side and orange on the other? Yes? Well, that is chromatic aberration, caused by the inability of single pieces of glass to bring rays of all colors to a common focus. An optician named Dollond combined two kinds of glass so that the error of one neutralized that of the other. All sharp-focus lenses are made achromatic, corrected for color. It is the first correction to be made in lenses other than pictorial lenses. For these, achromatism is not corrected, and the peculiar quality of the lenses, as you call it, is due to this. Explain? Certainly. You know that the ordinary plate is most sensitive to blue-light and that lying beyond it—which we cannot see—known as ultra-violet light. You also probably know that the most vivid of all colors to the eyes are those located at the opposite end of the spectrum, the reds and oranges. So that if you focus a semi-achromatic lens according to your vision, the blue rays will come to a focus in front of the focusing-screen, and spread out again before reaching the ground-glass. That is how the 'fuzz' is caused. The sharpest possible picture with a lens of this type is obtained by moving the focusing-screen nearer the lens, a distance of 1/40th the total focal length of the lens, after accurate focusing. If you move it in more than that, you get still another degree of diffusion. If you focus by visual impression and expose a plate, you will get a great deal of halation around your highlights. And—. But no amount of talk from me will enable you to make good pictures with your soft-focus lens; you must stand or fall on your own efforts. Learn by your mistakes. And remember—that the tool is a



BEACHCROFT PATH, MT. DESERT ISLAND GEORGE R. KING

good thing in its place, but it is not the only thing in the supply-store."

Proe took up a sheet of paper and a pencil, and prepared to take notes. "What else would you suggest to give breadth to a photograph?" he asked. "I want to be able to suppress detail in both highlights and shadows where necessary."

"There are several things you can do, but you must be governed in all cases by the circumstances. Bolting-cloth used in making enlargements is a good thing, and if used in making an enlarged negative gives a very pleasing quality of diffusion. If great breadth is desired, together with control over the gradations of the picture, employ one of the pigment-processes, gum or bromoil. My preference is for bromoil; some people think it hard to work, but I have not found it so. Reasonable care in manipulation is all that is required. Another one; a good way to eliminate detail from shadows and give them a soft pleasing tone is to use a piece of chiffon in front of a sharp-focus lens when making the original negative. Enlarged negatives on paper give a grainy image which personally I like very much. You can make a picture with semi-achromatic lens quality from a sharp negative by making an enlarged negative through a soft-focus lens. An enlargement direct through a soft-focus lens pleases a good many men. Try it, some time."

Proe finished his note-taking. Said he, "You interest me when you say that bromoil is easy to work. I've never had much luck with it. Will you—"

"Not now: some other time," said Kahn, as he rose to go. "Well, Proe," he concluded, "don't take too much to heart the things I've said about your lens. I dare say you will make me eat my words some day. It is not the lens that makes the pictures; it is the man behind that is responsible. An artist will make pictures with a cigar-box and a pinhole, they say."

Proe was beaming again. "So long," he said as they shook hands, "and thank you very much."

Pictures that Appeal

H. B. RUDOLPH

DABBLING with the camera has been a pastime with me for some years; not very seriously, just dabbling around making pictures and pasting them into my album. Lighting, composition, harmony, never entered my head until about three years ago, when I became a subscriber to PHOTO-ERA. It was not long before my competitive nature asserted itself and I began to have visions of *my* prints winning prizes in the competitions.

Many a Sunday morning I stole away from home at daybreak after gulping down my breakfast in such a trance—I was dreaming of the "perfect" pictures I was going to get that morning—that I hardly knew whether it consisted of fried mush or nightingales' tongues smothered in mushrooms, and hiked miles into the country, camera and tripod in hand. My six holders were always filled with the fastest plates I could buy; for, of course, I knew that the fastest were the best. My heart was filled with confidence, for I just knew that I could make a better picture than that recent first prize by so and so. Why, it was not even in good focus! The whole twelve plates must be shot; some upstream, some down stream, some at the kind-faced cow and a few at the old mill. Then, back home I would trudge, weary and tired, no time for luncheon, too eager to get into the darkened corner of my cellar to develop those plates. Dandies? Well I should say so! How could they be otherwise? Prints were made and entered a few at a time in the different competitions; but I was doomed to bitter disappointment, for they were all returned to me unused. I was as mad as a hornet! What could be the matter with that competition-judge? Didn't I purposely stop way down to get yonder sycamore just as sharp as this large oak in the near foreground? Wasn't that mill squarely in the middle of the plate? And didn't the portrait of the old cow hold your gaze? Suppose her tail did switch during exposure; it was insignificantly small compared to the size of her head and *no one* would notice that.

After many of these mad spells, it finally dawned upon me that a photograph, even though technically fine, is not necessarily a good picture; and that the blame for my failures was not resting upon the shoulders of the competition-judge. Also, that a real picture is one which appeals to the many, not just to the maker thereof. From the careful study of PHOTO-ERA articles and pictures, I gradually developed a desire to learn to recognize the makings of a good picture when I saw it. I soon formed a habit of observing things



"GOOD MORNING!"
H. B. RUDOLPH



"MUSIC HATH CHARMS" H. B. RUDOLPH

about me and was always on the alert for material for a good picture. I found so many subjects right at home, that my hikes into the country have been temporarily postponed.

What class of pictures could appeal more than pictures of children? The children of any neighborhood furnish ample material for pictures that appeal. As I have three small children in my own home, I consider myself well supplied with subjects, so that if my prints fail to appeal, the fault must lie with me. Pictures of children may be divided into two classes: posed portraits, and photographs, with a thought behind them or which tell a story. Of course, the former will appeal to the parents and relatives of the child; but as we wish to make pictures that appeal to the many, let us consider only the second class. By the careful observations of the happenings of every-day life, we can find many appealing pictures of children. Once found, the making is but a matter of application. We might lose a little patience and waste some perfectly good plates; but I have always considered the experience gained from a wasted plate, in an honest attempt, worth many times its cost.

What mother does not eagerly await her baby's first smile? Almost any mother will take a second look at my print, "Baby's First Smile." Hence it appeals. This picture was found and made in my own home; no hiking necessary.

"So Big!" There comes a time in every baby's young life when both hands are held up at the sound of these two words. This print appealed. It appealed to the editor of the *Cleveland Plain Dealer*, one of Ohio's largest newspapers. He used it for the cover-design of the pictorial section of a Sunday-issue. The reproduction was about 10 x 12 inches. The original print is about 2 x 3, though made with a seven-inch lens which will cover a 5 x 7 plate. Let us consider the advantages of making the original print so small. The picture was made in the house during the winter months by the light of two windows. Exposure was necessarily short (about $\frac{1}{2}$ second) as babies will not pose long for such pictures. The small image does not require racking of lens far from plate, thus allowing for shorter exposures. Then, again, we get away from the distortion which was so evident in my portrait of that kind-faced cow.

Very often daddy must amuse the baby while mother does the dishes. "Music Hath Charms" is a good example of how it is accomplished. Daddy just picks up his guitar, props his feet up

on the piano-stool and whistles "Over There." It's plain to be seen that the baby is amused. Of course, mother had to drop her dish-washing to light the flash and press the bulb.

"Good Morning!" is nothing more than a record of a daily occurrence in our home as mother comes through the portières with babe in arms after the morning-bath. Nevertheless, this picture is full of feeling and tells us that the mother is happy, and proud of the little youngster. This picture tells a story and, therefore, appeals to us strongly.

So it is evident that the first step in making appealing pictures is to find them, and to find them we must learn to observe and notice, for they are all about us, hundreds of them. If not children, the village-blacksmith, the old watchmaker around the corner or the shoemaker down the street. Not posed portraits of these workers, but records of natural and interesting positions while at their work. As to the camera requirements for making these pictures, that is largely a matter of choice. Some of us will choose a roll-film camera with but a small finder to help us to place and compose our picture, and a focusing-scale to adjust our focus. Some will choose a film-pack camera and others the bulky plate-camera. Each has its individual advantage. The first two, because of their compactness, are by far the most convenient to use, and usually it is with one of these kinds that the average amateur enters his career of picture-making. But as he becomes more interested and serious in his photographic work, he very often adds a plate-camera to his outfit. Not saying that equally good results cannot be obtained with the small film-camera, for with practice one can do wonders with that little finder and some good judgment. As for myself, I can get a great amount of pleasure and satisfaction in studying and arranging my pictures upon the ground-glass. Therefore I have become very much attached to my long focus, 5 x 7 plate-camera, with a convertible anastigmat lens set in a fast between-the-lens shutter. The long bellows allows me to use the rear combination of lens alone when I desire, for landscape-work. The extra speed or reserve power the anastigmat has over my old rapid rectilinear lens enables me to make indoor-pictures with remarkably short exposures. The shutter is capable of very short exposures when I attempt speed-work. In my own estimation, this outfit comes as near the ideal for an all-around camera as possible. The long bellows in landscape-work must be used to be appreciated. By using rear-combination of lens alone, the focal length of my lens is almost doubled, thereby overcoming a common fault



"SO BIG!" H. B. RUDOLPH

found usually in lenses as originally furnished with cameras. This common fault is that they take in too much view, very often so much that two pictures, each with a separate interest, can be composed from one negative. To verify this statement, just think back and count how many prints you have trimmed down to almost half size before you obtained a view which suited you. So by using our rear-combination we get a larger image of what we really wanted with much better perspective. Of course, we must stop down some to get depth and consequently lengthen our exposure; but this is no disadvantage in landscape-photography. Right here we must guard against underexposure, as the stop-figures (as furnished for the entire lens) do not hold well when only half of lens is used. I think it advisable to expose two to three times as long as when using entire lens, same stop. "Into the Woodland" is a 3 x 4 print picked from a 5 x 7 negative with the plate used in a vertical position. When looking at this print, we cannot but enter and follow the driveway clear to the left-hand margin. A print made from the entire 5 x 7 negative includes a highlight, a patch of sky near the top of the picture, which distracts our attention and leads us away from the real picture, just because my 7-inch lens took in too much view. If I had moved my camera backward, say about fifty feet, used the rear half of my lens alone and turned my plate horizontally,



INTO THE WOODLAND H. B. RUDOLPH

the result could have been this 3 x 4 view virtually covering my whole 5 x 7 plate.

Now some may ask, "Why not dispose of your short-focus lens and replace it with a long-focus one?" I would answer in the negative, for very few camerists confine themselves to view-work alone, and although a long-focus lens is considered best for view-work, a short-focus one is preferable for speed-work. We have all read, time and again, that the depth of field of any lens at a given stop decreases as the focal length increases. We also know as the size of stop increases, the depth decreases. In high-speed work, a large stop is imperative, and we can use a large stop and still get fairly good depth with a short-focus lens only. Another advantage of our short-focus lens in speed-work is that the shutter-speed required to stop motion grows less as the focal length of our lens decreases. Thus the chance of underexposure is also lessened.

It is claimed usually that extreme high-speed and good illumination cannot be obtained with a between-the-lens type of shutter: that the full stop used is open for only a small fraction of the exposure, the rest of the time being spent while the shutter-leaves are opening and closing. The curtain shutter is recommended, therefore, and more often used for this class of work as the lens can be used with the benefit of the full stop during the entire exposure. To all of which we must agree. Although each type of shutter has its advantage, it also has its disadvantage. The greatest disadvantage found in the curtain-shutter is the distortion often present when photographing very rapidly moving objects, especially large objects. This distortion comes from the fact that the whole plate is not exposed at once, but in a succession of strips as the curtain passes before the plate. Let us suppose, for instance, that we are at the auto-races and are



"SPEED-DEMONS" H. B. RUDOLPH

using a 5 x 7 reflecting-camera with a curtain-shutter set at a speed of 1/1000 of a second. Even then it takes the ⅛-inch slot in our curtain 1/25 of a second to cross the five-inch plate. So that if one of our speeding autos throws an image 2½ inches high, the time which elapses between photographing the bottom and top of this auto is 1/50 of a second. If the auto is making a mile a minute, it covers 88 feet per second, so in 1/50 of a second it covers something more than 1½ feet. We will call it 1½ feet, for convenience. As the curtain-shutter runs from top to bottom and the image is reversed on the plate, we photograph the bottom of our speeding auto 1/50 of a second before and consequently 1½ feet behind the top. This gives the auto a forward-leaning appearance and even the wheels are recorded as oval instead of round. Of course, the larger our object and the greater its speed, the more noticeable the distortion; but it is there, even in smaller objects although not so evident. Another unpleasant effect produced by the curtain-shutter is the very-much-out-of-focus background showing patches of light circles especially noticeable when photographing objects "close up" with the lens wide open. So that although we have the advantage of full illumination with the curtain-shutter, we must put up with the above-mentioned disadvantages.

In the modern between-the-lens type of shutter, we sacrifice some illumination; but both the above-mentioned imperfections are overcome to a certain extent. The distortion is overcome because we expose the whole plate at once. We either "stop" our object or we do not. One thing is certain: we do not stop the bottom of a 2½-inch image 1½ feet behind the top even if it is going a mile a minute. There are makes of this type of shutter which claim extreme speed, even as much as is claimed for the curtain-shutter. Whether or not this speed is attained, I do not know. But I do know that extreme motion can be "stopped" with a between-the-lens shutter. "Speed-Demons" is evidence of this statement. These riders were making not less than 50 miles per hour, and the wheel-spokes on the foremost machine are recorded plainly. This picture was taken with the camera resting upon a post of the inner fence of the race-track and we obtained almost a full side view of the leader and still he was virtually "stopped." So much for speed-efficiency.

The unpleasant — very-much-out-of-focus — background often produced with our curtain-shutter is improved greatly by this type of shutter because we get the advantage of depth produced by a small stop when the shutter first opens, increased gradually to a large one when the shutter is fully open, then decreased gradually until the shutter is again closed. This produces sharper background and an effective roundness which is much more pleasing in appearance.

Of course, no photographic outfit is complete until an enlarging-camera of some sort has been added. The enlarging-camera in picture-making acts like the proof-reader in a print-shop. Even with much thought and careful study of our subject when exposing our plate, there is still often a chance to improve our completed picture. Here is where our enlarging-outfit steps in. Parts of negatives, after being enlarged, often yield more appealing pictures than the entire negative would. The enlarging-process gives us a second chance to consider the shape and balance in our picture, and I find that very often I can improve upon what was thought to be a well-balanced picture when the plate was exposed. For the same reason that a good big man can whip an equally good little man in the roped arena, will a good enlargement appeal more than an equally good, small print.

Our enlarging-apparatus does not need necessarily to be an expensive and elaborate outfit to be efficient. All we really need is an arrangement to illuminate a negative evenly and a way to keep the negative plumb with our paper-easel. The rest of our outfit we have already in our camera. Two large trays, a few push-pins and the bromide paper is all we need to add to our darkroom-accessories. I have found Eastman's Brownie Enlarging Camera Illuminator very satisfactory. With a 100-watt Mazda bulb instead of the smaller one which they recommend, enlargements up to 11 x 14 can be made on bromide paper with exposures ranging from 15 to 60 seconds with my anastigmat wide open. By drawing the blinds in the kitchen after darkness has fallen, we have a comparatively safe darkroom for enlarging. A pine-board hung flat against the wall will act very nicely for our paper-easel. By lining our Illuminator up with the edge of the kitchen-table upon which it is placed, and the edge of the table with the figures in the linoleum upon the floor, we have things plumb and parallel enough to make satisfactory enlargements. By backing our camera up against the Illuminator, the front of which holds our negative, we are ready for business. This arrangement leaves a space open between the lens and bromide paper, giving us a chance to "dodge," such as holding back parts and printing clouds into bald-headed skies.

So if we will stop snapping around thoughtlessly, but get serious in our photographic attempts, form a habit of observing, supply ourselves with some efficient outfit and then apply ourselves, we cannot but make beautiful and artistic pictures that appeal.

Pictorial Photography as I See It

In Three Parts—Part III

C. W. CHRISTIANSEN

ONE thing that a pictorialist must do, above all things, is to be careful to arrange his composition so as to have pleasing as well as decorative lines. Too much care cannot be used to place your leading lines, for you know that you are dealing in monochrome and lack the advantages of the painter. It is of utmost importance that you place your main objects so that your lines lead up to them. This applies particularly to landscape-work, although you must remember the importance of lines in handling all subjects.

We all know that the curved line is far more pleasing than the straight. A perfectly straight line is a cold, hard, uncompromising thing—detractive and certainly to be avoided. Even with the greatest watchfulness, it is likely to assert itself in unlooked-for ways; for like the bad penny, it's hard to get rid of. It may be your sky-line, perhaps in the sky itself, or a tree, or any one of the innumerable unforeseen ways. However, there are instances where a short, straight line may be used to advantage and that is to bind the composition together, as explained in a former article. If so used, it must be placed so as to be as unobstructive as possible. Note the illustration "Italian Garden," Part II.

Variety in spacing should always be attempted. Never cut the print exactly in halves by your sky-line or your tree; for in dividing the work into two parts of equal proportions, you are very likely to divide the importance and interest of your main object with something of lesser consequence. Balance is another important point in building your composition and may be acquired in many ways. A very heavy dark mass may balance a small light one, or *vice versa*.



A HILLSIDE C. W. CHRISTIANSEN

A little bush may give balance to a large tree, if properly placed. Some very charming things have been made by balancing light-and-shade effects. There is nothing new in these few hints—indeed, they are as old as the hills; but they are an absolute necessity to the photo-pictorialist. They are the problems that confront the camerist always, regardless of the time spent at the work. Still, in these very things lies the fascination of pictorialism, for, using your individuality, your chance to construct is limited only by your experience and sense of what is decorative.

The reproductions in these articles are not meant to be standards to conform to, nor are they faultless by any means. They are my understanding of the subject carried out to the best of my ability along lines herein set down. I think that they adhere closely enough to what is called pictorial photography to be of some service to the novice. I have chosen as wide a range of outdoor-subjects as possible from among my collection, hoping to give an idea of the diverse forms of composition, as well as to bring out the power of motive, the story-telling quality that will make your print "live."

In "A Hillside" I hope to show the value of lines. It is a form of composition considered by many to be one of the most beautiful, namely, the letter S. The lines were my consideration, although the print has a potent story-telling value. Balance is found in the hay-stack and the house. The connection link is the S-shape line leading up to the main object of the picture. Note the various shapes that break that line, making it a pleasant trip for the eye. The journey is not quite finished at the house, for your eye will wander off to the cloud, your imagination picturing life beyond the hill, then return to the cloud and thence on to home and rest and absolute peace.

What story have we in this simple hillside?



FISHERMEN C. W. CHRISTIANSEN

Well, I think that we have a very sweet bit of human nature in this little scene. The two words that have the greatest appeal to all, that are universally understood and revered are "mother" and "home." They are so closely connected that one cannot think of one without the other. But we, whether of noble or humble birth, cultured or uncultured, know that no other word will call up as many dear memories as "mother," no other word will afford us as much peace and sense of rest as "home." Here we have a little home, someone's sanctuary; where, after a strenuous day in the fields, may be found the love and sympathy and understanding that mean so much to each and every one of us. The haystack in the foreground furnishes its chapter by telling of man's instinct to provide for the future, and our entire little picture is fairly imbued with the "spirit of man."

Action or motion, although perhaps not quite so important from a pictorial standpoint, has its value in genre-studies particularly, where in many cases the power of the work depends entirely upon the successful rendition of action. In "Fishermen" action is the chief motive. Here we have two fishermen busily engaged in dragging to shore whatever prey may have become ensnared in their seine. Note the attitude of these sturdy "Sons of the Sea." Bodies straining to the task at hand, yet braced to meet any emergency; they are the very embodiment of action. In the water in the foreground, we also have an aid to our motive, adding life and realism to the scene.

I now come to the one question that has been debated pro and con for many years and which still seems to be as far as ever from any acceptable settlement—control or modification. I understand fully that a howl of disapproval will be sent up by a large number of workers, against my point of view and also my method. The old saying, "All's fair in love and war," could, I think, be read to include photography. Of course, we are referring to skilful workmanship. Work that shows interference or inferior handling is not to be tolerated. After all, a print is a print if it has been put together from five or six or even more negatives. Or, if we combine



OUTSKIRTS OF THE VILLAGE
C. W. CHRISTIANSEN



OUTSKIRTS OF THE VILLAGE C. W. CHRISTIANSEN

(Crude original)

several negatives, copy the print and from that make our enlargement; or, finding an obtrusive object in the negative such as a branch or a sharp line, we remove it and thereby obtain a more pleasing result—why should we not do so? Just let us see for a moment to what lengths adherents of straight-photography would go. If a devotee of straight-photography were out in the woods and found a pleasing bit of landscape, would he hesitate to remove any little objectionable shrub or growth that would mar the harmony of his composition? No, he would not. Would he hesitate to plant a few reeds or twigs if he found that they would add to the beauty of theme? Decidedly not. Would he have any conscientious scruples to overexpose or underexpose his plate, for the purpose of obtaining a certain mood or impression? No, of course not, why should he? Then, too, when he develops his negative, would he pause and ponder upon the advisability to overdevelop or underdevelop it to work out his idea? Why no, that is absurd. Would he stop with the straight result of his negative in the case of the society-lady with the crooked mouth? No, he would not; nor would he have any squirms of conscience about strengthening the eyebrows or lashes, or, in fact, changing the entire features so as to make her as beautiful as it is in his power to make her. He would do all these things mentioned, and more, and then calmly sit down and rant against control or interference. You who preach straight-photography should never do any of these things, and not doing them, how many of you workers would be making your living by photography, and how many of your prints would ever find their way to an exhibition-wall?

Making excuses for one's own deeds is a common heritage of man. But who shall say just where control should begin and end, and just what constitutes right and wrong? My motto is,



THE MAJESTY OF PICO HEIGHTS — C. W. CHRISTIANSEN

(*Crude original*)

"Find a motive or idea, then go ahead and carry it out to the best of your ability, employing any means to that end." Perfection has not been found this side of the grave, and adverse criticism is our lot, do what we will.

In the pictures "Outskirts of the Village," and "The Majesty of Pico Heights" I hope to be able to justify my contention that better pictorial prints are the result of so-called modification. However, if you can get your impression in a straight print, do so by all means. For there is no particular glory or reward in doing a lot of unnecessary work to arrive at the same final result. I will leave it to the reader himself, to judge whether or not I have succeeded in bettering my original print.

The straight print from the original negative of "Outskirts of the Village" is a very poor technical negative. I will describe just how I went about to change it. Several positives were made before I succeeded in getting just what I wanted. Then, only by combining two positives, could I obtain contrast enough for the enlarged negative. Having procured my 11 x 14 negative, some glue was placed around the edges on the back and a piece of fine tracing-paper was placed in position and rendered perfectly smooth. When the glue is dry, the paper will be found to present an unwrinkled surface ready to be worked on with crayon-sauce or a common lead-pencil. The beginner is likely to overdo any hand-work, but after a few trials he should be able to judge accurately just how heavy a coat is required in most cases. A few stumps of various sizes should be procured for blending-purposes. He may do the work itself with the stump, but I prefer to use a lead-pencil and blending with the stump. Each worker will naturally adopt a system of his own. Of course, it sometimes happens that the work done turns out to be unsatisfactory in execution or design; then a new paper has to be used. One simply has to feel his way, often trying again and again before the goal is reached. The finished print is a simple landscape, the sky entirely worked in by the above method. This was not difficult, as there was some body to the sky to work on; but where this is lacking the art becomes more complicated.

For a general summing up of the print "Outskirts of the Village," we have a few eucalyptus trees, a tower and some small houses for a base to work on. The motive I had in mind was to portray one of those days when all kinds of



THE MAJESTY OF PICO HEIGHTS
C. W. CHRISTIANSEN

weather prevail: brilliant sunshine and darkness and storm. A day when the sun suddenly bursts through the clouds, sending shadows hurrying and scurrying playfully over hill and dale, when the woods become a truly elfish fairyland, diamond-decked and filled with strange flashes of light, when mystery abounds everywhere and one is filled with the mad desire to throw away all care and dance to the tune of the wind, and play hide and seek with the fleeting shadows through some woodland glade.

The illustration "The Majesty of Pico Heights" was worked out after the same manner as the picture just mentioned. However, in this case, the final result was quite different from my original idea at the time of exposure. Those tall palms standing alone on the hill gave me an impression of majesty, and I intended printing in a large cumulous cloud. Later on, I changed my plan to the one adopted, and in making it vertical, I emphasized the height of the trees and still retained the feeling of distance and depth. Working it up to an evening-effect still furthered the spirit of majesty.

At the outset of these articles, I said that I had been helped by experienced and capable workers. Now, we all know that there are those who are big enough to take the lead in their undertakings, virtually by their own untiring energy and the ability to forge ahead and do things. But maybe it proves a greater "bigness" to help others along in their struggles who are less fortunate. Such a man I found in W. H. Porterfield, of Buffalo, N.Y. What little success I may have gained I owe more to his encouragement and kindly help than to any other person I have met.

As I write these last lines of my article and have before me the print "The Majesty of Pico Heights"—which by the way happens to be my last endeavor—I cannot but think back to the time when I was at the cross-roads with its sign-post, one arm marked "Understanding" and the other "Confusion." My destination was photo-pictorialism. Here I came to the realization that I must take a deciding step; but, somehow, "Confusion" seemed to be my only outlet. Here is where Mr. Porterfield found me and set me down on the road to "Understanding." And here, fellow-worker, as we stand on Pico Heights, looking out into the majesty of approaching night, I will leave you with the sincere hope that I may have been able to help you to find something which you have been seeking. If you are now standing at your cross-roads, undecided and uncertain, and if these articles have aided you and started you on the right road, I shall be happy in the thought to have been of service. Whatever style of work you choose, over whatever roads you travel, I wish you much success and all the joy and happiness that photo-pictorialism has given to me.

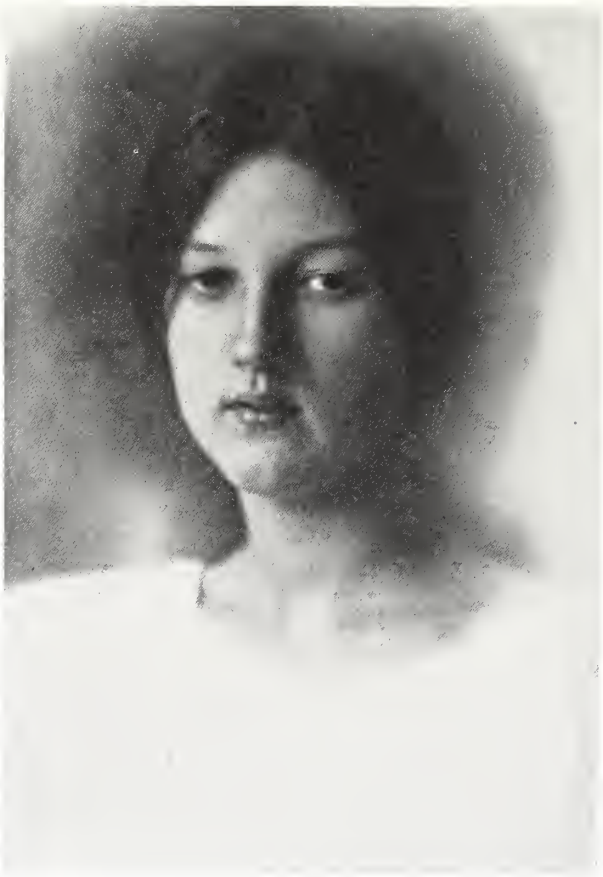
A New Plan for Salon-Hangings

SIGISMUND BLUMANN

WHEN a photographer submits his pictures for a public exhibition, it might be presumed that what he presents for the purpose of establishing or maintaining his standing among artists is his best and characteristically an expression of his own temperament and personality. But this is rarely the case. Between him and his public stand a selecting jury, or hanging-committee, or body of judges, or what you will, and, no less potent to influence his work, a constant thought of what the jury on awards will approve. Such a complex influence does not make for the highest attainment. It hampers the individual in his creative activities and it puts too much of what should be the prerogative of the God of man and the gods of art in the hands of human beings. And in the hands of human beings more or less under the spell of passing tendencies or personal idiosyncrasies. The evil works coming and going.

Let us conceive for the purpose that John Jones has an ambition to work in straight lines and return to the old beauties of sharp and clear focus. Remembering the exquisite quality of Daguerreotypes and wet collodions, he feels that he can best express himself in similar fashion. There is the terror of what the disciples of Struss, Pinkham and Smith, Verito, and Pinhole may say of him and do to him. The composite printers will hold his simpler efforts in contempt. Those workers in the heroic sizes will laugh him out of court. Painters will condemn his minutiae; photographers refuse his real photography.

This is not a defense of straight photography



GIRL'S HEAD JULIAN A. BUCKLEY

or a slam at the present and advanced methods. I have graduated from earlier prejudices. A picture is what it is irrespective of the methods by which it was produced. In fact, I hold that if a chromo could be made to be better than a hand-painting it must be a better work of art. This is or should be so evident as to be inane, yet it is contradicted by the users of the brush. Probably from the same motives that actuate a medical doctor to condemn a cure by mental, or Christian Science—because a patient cured without medicine or the knife is not cured even when he is made perfectly well.

This leads to a daring assertion. Most painters are the very worst judges of photography. Quite so are most photographers poor judges of good paintings. The latter see and feel in monochrome. When they strain to attain the color-sense, they degenerate as photographers. I have yet to see a print in so-called natural colors that could be called artistic. Pleasing, curious, impressive, yes; but artistic, never!

The multiple-gum workers, like Doctor Darcy Powers with his chemical toning eked out with dyes, chalks, paints and what-not, have gratified their friends, amused themselves and added to the curiosities of photography; but they have in no way enriched art.

The votaries of the brush, trained to see colors on a flat surface transmuted to thought-colors, cannot be expected to sympathize with the peculiar ability of the photographer to express his emotions in one color and its gradations. Why! Painters hold the very means by which photographs are made in contempt. They may pretend, or even be self-impressed with an idea, that they are liberal-minded; but just as there is a legal mind which interprets right and honesty in terms of law instead of wisdom and morality, so there is a painter's mind which

judges from its own technical constitution. No one is to blame. It is so, and that is all.

Deciding that a jury of photographers should be the one to pass upon photographs, we come to the prejudices of individuals and contingents. To insist that there are no eligible judges would be, seemingly, to suggest that God Himself must be the last and only resort. Well, that may be so. But photographers are on no better or closer terms with their Maker than other men, and might find it difficult to enlist Providence in their Salons. This is not sacrilege. We, both classes who go afield with palette and brush or with camera, have at least a much superior claim to approach the Divine Presence in that we seek the places where He manifests in highest and mightiest. We worship under the larger dome of heaven with no roof between. We hear His voice in the sounds of land and sea and, with our hand in that of Nature, look on His Face and are bettered. What can spires, stained-glass windows and droning ministers—those Commission-Merchants of Salvation—do for us more than this? For all this, we still must look to men to plan our exhibitions and, in some way, select what shall be submitted to our limited time and the limited wall-spaces.

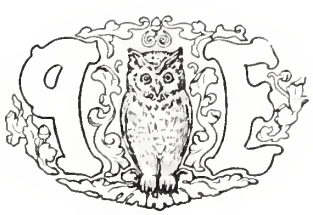
At last, we have wandered and deviated till the little path opens on our objective point. There is a way in which Salons may be made to serve their purpose, a way whereby the best may be gathered and shown. It will require organization—the organization of years ago, when camera-clubs flourished and affiliated.

Let each camera-club hold a monthly or a yearly exhibition. Let the club-membership vote as to the best ten or twenty pictures hung. And may that hanging be free of any selecting jury. Every member who wishes may exhibit, say, five prints. If too many are offered for one time, cut down the number per individual. The best from such a collection having been voted, they are sent to an annual exhibition which may be held at one city, year after year, or changed yearly, or which may be moved from city to city till it has made the rounds of all in the affiliations. Another popular vote of the active participants is to be made as to the best in the general collection, and the workers so exalted are to be invited to make a given number of pictures for an annual National Salon. This many-sided method of elimination takes the judgment out of the power of a small and more or less narrow and erratic set of men. Popular judgment is rarely the best; but it is better than bad and wrong judgment. And as the photographer will feel that it is a hopeless task to make his pictures to suit so large a jury, he may be presumed to consciously, or unconsciously, fall back upon his own tastes and do himself honor—or otherwise.

Such a National Salon as is suggested should be a close corporation. Its Salon should consist of men specially invited. Promiscuous invitations bring a promiscuous gathering. Entrance into the National body should be so difficult as to be the height of photographic ambition. It should offer an incentive for the very best. In course of time, such an exceptional group of men shall have been gathered as will make it possible to submit photographs to a judgment that may be called Photographic Judgment, as differentiated from legal, or medical, or painters' judgment.

And so certain do I feel that this plan can be carried out and that it will meet the hopes our best pictorialists have had for a long time, that I ask all interested to come forward with their own views, and if they be in agreement with the scheme, immediately to set out to start the thing from their location. My time is limited, my position in photography precarious and obscure, so I shall beg that you enthusiasts correspond among yourselves. Not that letters are not welcome, but that I can do nothing to assist. I have no affiliations and no standing. But there are many who belong to influential photographic societies and whose status is such that a word from them will accomplish much.

Without being ungrateful to the Department-Stores for their efforts to keep alive the photographic spirit, let us take the power to establish standards from the hands of judges and juries made up of prominent men, but of men satisfactory to the head-buyers of the photographic departments of these shops.



Trial-Exposures and Economy

IN these days when universal economy is rapidly becoming a matter of necessity, there is no detail of daily practice that is not worth investigating from the waste-saving point of view, and one very important detail is certainly that of trial-exposures. In spite of the fact that numberless methods to estimate correct exposure exist, it is nevertheless a fact that in a great number of cases, workers prefer an actual trial, and experience shows that, after all, nothing is so absolutely reliable as this expedient. In most cases, however, the trial is made on a full-size plate or full-size piece of paper, the operator thinking that if this first trial proves a success he will have saved material. He will, of course, have done so, but the odds, in our experience, are against the success of the first attempt. It may be moderately good, but not so good as it should be, in which case quality suffers; or it may be bad altogether, which means that on this one trial sufficient material has been wasted for several trials. Indeed, it not infrequently happens that on the first trial proving a failure, the second is not exactly a success, so that a third becomes necessary, and this doubles or trebles the waste.

The mistake, of course, consists in attempting to do things by halves; instead of weakly hoping that the first attempt will prove a success it is far better to decide definitely that it is to be a trial-exposure, and nothing else; in which case we need not use a larger plate or piece of paper than is necessary for an efficient trial, while we can make a series of exposures in steps, so as to make sure of gathering definite information. The material used in this way is not wasted, because from it we gather definite and important information.

A trial of this type is very necessary in enlarging, and it is extremely useful in copying-work when we have not the advantages of standardized illumination. It is also sometimes useful for getting critical focus when this is essential, in which case we can test the effect in one or two positions of the focusing-screen, both inside and outside the one position that, visually, appears to be correct. Thus we sometimes need trial-exposures on printing-paper and sometimes on plates. The former case is easy to deal with, and the most economical way to make due provision for such trials is to take a few sheets of paper belonging to one particular batch, cut them up into suitable strips, and store them ready for use in a special box. Paper-makers generally include in each packet of cut papers one small piece especially for trials: thus in an 8 by 10 package we may find a 4 by 5 separate piece inserted for this purpose. As a matter of fact, these are seldom so satisfactory as longer strips, and so, as a rule, we prefer to collect and store the small pieces for making small prints, and cut up one of the bigger sheets into strips for trials. There is no extra waste here, because one 8 by 10 sheet will probably suffice to give all the strips required for four packages of paper, whereas the four 4 by 5 pieces provided can do no more, and will probably not do so much, with the same efficiency.

While the use of trial-strips in the case of bromide paper is not uncommon, very seldom do we see the same expedient used in the camera. Though half a quarter-plate is as efficient for a trial as a complete one, yet few will hesitate to use the latter, while we have even seen three 8 by 10 plates wasted in the attempt to arrive at the exact exposure on a special subject, though a quarter of one plate would have been sufficient. The alternative to employing strips of large plates for trial purposes is to use a small plate in a carrier. It seldom happens, however, that a small plate coated from the same batch of emulsion is available, whereas in any case the mere testing of the effect produced in the center of a large plate is not an adequate test for the margins, which may require just a little more exposure, or, perhaps, a reduction of the stop aperture to secure uniformity of illumination. Nothing is so reliable as a long strip that will reach the margins; therefore it is best to sacrifice one plate at the start for the provision of test-strips.

Plate-strips must be cut the long way of the plate, as the only means to give a series of exposures in strips is to make use of the slide of the plateholder, which invariably draws out longways. An 8 by 10 plate will make four serviceable 2 by 10 strips, and if we provide also two 3 by 10 strips, cut from an old useless negative or spoiled plate, or from stiff millboard, it is an easy matter to fill the plateholder with a trial-strip centrally. It is a good plan to keep the cut strips in a plate box fitted with a central division, so that the trial-strips can be kept in one side and the packing-up strips in the other. If these latter are of glass, they can be covered with paper gummed on, and then they can be distinguished from the trial-



CUSTOM-HOUSE TOWER, BOSTON, MASS.
HERBERT B. TURNER



SAN FRANCISCO, 1915 W. H. RABE

strips by touch. If one feels reluctant to cut up a plate into four trial-strips on the ground that two or three may never be needed, a little ingenuity in mapping out the plate will provide one or two trial-strips and one or two plates of smaller size. Thus an 8 by 10 will cut into two 2 by 10 strips and two 4 by 5 plates; or into one $1\frac{1}{2}$ by 10 trial-strip, two full-size stereo plates, $3\frac{1}{4}$ by $6\frac{3}{4}$, and two lantern plates, size $3\frac{1}{4}$ by $3\frac{1}{4}$. Other size plates will cut up differently, but when possible it is best to arrange matters so that pairs of smaller plates can be produced, as these are stored more safely than single plates if packed face to face. We may add one more case in which trial-exposures on strips are very useful, and that is when preparing bromides that are to be sulphide toned. Very much here depends on the printing-exposure, and if a strip is prepared and put through the sulphiding-process the best possible results can be obtained with certainty.—*British Journal of Photography.*

A Liberty-bond in the hand is worth more than a bushel-basket full of wild-cat stock-certificates in the garret.

EDITORIAL

Photographic Profiteering

IN these days when a certain class of manufacturers and purveyors are making huge profits out of the war—overcharging the public, the government, and even the soldiers who are fighting so that we may live in peace and security—it is pleasant to note that the photographic trade is not guilty of this or any other form of greed. When the cost of materials that enter into the manufacture of cameras, lenses and accessories was raised, it was but natural that the price of the finished product should be increased, but not in undue proportion. In the case of dryplates, for example, the retail-prices have been affected but slightly, notwithstanding the well-known scarcity of glass required in their manufacture. Certain popular developing-agents imported hitherto from Germany, soon became scarce, bringing fabulous prices, and eventually were impossible to obtain. Fortunately, excellent substitutes, even absolute equivalents, were produced in England and in the United States, and sold at prices that everybody considered reasonable. Glass necessary for high-grade optical instruments, including standard photographic lenses—a commodity of which the world's supply came from Germany—was soon being made in this country, but not in sufficiently large quantities. The logical result was an increase in the price of camera-lenses, popular types of which are now being sold at a reasonable advance over pre-war prices. With the advent of the proposed tax on necessaries, in general, retail-prices of photographic materials of nearly every description will undergo a still further advance. This economic expedient may be used by producers of fuel, foodstuffs, clothing—indeed, of every known commodity—to raise prices in a selfish and cold-blooded manner. Who is to stop them? What is to prevent them? The photographic manufacturers and dealers, however, have always been ethical in their dealings with customers, and may be relied upon to continue to treat them with all possible fairness.

In considering the question of price-raising, the intelligent consumer should try to distinguish between legitimate and ill-proportioned profits. Speaking of large profits many corporations are making in relation to profiteering, a prominent and well-known Boston banker says that business is being done at the present time under great difficulties and uncertainties, and profits are not calculated in advance. Many experienced dealers prefer to restrict their operations and even retire from active business rather than to take the chances of loss. The profits of this period cannot be finally calculated until the war and period of adjustment are over. Up to this time, fortuitous circumstances have been favorable to profits; but experience has taught that the profits which come under such conditions are needed in the long run to meet the losses which come in the same manner. The favorable turn of a year does not warrant a departure from the usual business-methods, nor can ideas which no one adopts in his own affairs save under exceptional conditions—of which he would insist upon being the sole judge—be set up successfully as an official standard of conduct.

The Deleterious Fixing-Bath

THERE are many capable photographers in the professional ranks who give the utmost consideration to the development of their plates, but slight the fixing-process—treating it as a merely mechanical operation. In preparing the acid fixing-bath, they show no accuracy in weighing the proportions of the necessary chemicals, observe no order in dissolving them and rarely examine the physical condition of this extremely important solution. They never take the trouble to test the purity or strength of the required chemicals to compound the bath that simultaneously fixes, clears and hardens the plates. No wonder that so many valuable negatives are in a hopelessly ruined condition soon after they have been placed on the shelf. A negative that has been fixed properly and stored in a safe place, should last indefinitely. Plates that were fixed in a plain hypo-solution by these same delinquent photographers, many years ago, do not show the least sign of deterioration. The fault in the other case is apparently due to the compound fixing-bath, but really to the careless manner in which it had been prepared. Should the photographer find it difficult to procure certain rare chemicals, he can rely safely on the old, standard formula that calls for hypo, sodium sulphite, powdered alum and sulphuric acid. Directions should be followed scrupulously.

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, or artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Landscape With Figures Competition Closed July 31, 1918

First Prize: Bertran F. Hawley.
Second Prize: J. Herbert Saunders.
Third Prize: G. H. Seelig.

Honorable Mention: Charles F. Bozorth, F. E. Bronson, O. C. Dean, Kenneth D. Smith, W. Stelcik, Henry Strutzenburg.

Subjects for Competition — 1918

"Shore-Scenes." Closes August 31.
"Indoor-Genres." Closes September 30.
"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Flashlights." Closes December 31.

1919

"The Spirit of Christmas." Closes January 31.
"Still-Life." Closes February 28.
"The Spirit of Winter." Closes March 31.
"Rainy-Day Pictures." Closes April 30.
"Miscellaneous." Closes May 31.
"The Spirit of Spring." Closes June 30.
"Landscapes with Figures." Closes July 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Curious Cause of Fog

IN order to prevent staining the fingers during development, particularly when using Pyro, it is sometimes advised to dip the fingers frequently in a solution of oxalic acid. It is true that this prevents stain effectually; but it is also an occasional source of fog. Frequently when rinsing a pyro-developed plate, when the fingers are moist with an oxalic-acid solution, a wave of fluorescence will run along the edge of the tray, fogging a sensitive plate.

McMORRIS HOUSTON, M.D.



ON THE WATCH — BERTRAN F. HAWLEY

FIRST PRIZE — LANDSCAPE WITH FIGURES

Advanced Competition—Domestic Pets Closes November 30, 1918

Nearly every home enjoys the companionship of some sort of a pet. It may be a canary, a small turtle, a goldfish, a rabbit, a dog or a cat—whatever the pet may be, it is part of the family's home-life and offers countless photographic possibilities to the interested camerist. At the outset, it will be well for contestants to remember that this competition does not call for *record* photographs of domestic pets. It is a comparatively simple matter to photograph a pet if no attention is to be paid to the composition or appeal of the picture. The photographs that the judges hope to obtain in this competition cannot be made without due thought and technical skill. There must be an appeal and it must not be artificial. Above all, do not dress up pets in all manner of grotesque costumes, or induce them to simulate some human act like smoking a pipe, being ill in bed, etc. Such pictures do not express the purpose of this competition. Let us have our pets as we know them, free of all artificiality.

It does not follow that the domestic pets competition must be confined to those usually kept in a house; it may also include pets on the farm or estate. However, such animals must be *pets*, not merely domesticated animals. An intelligent horse may become just as great a family-pet as a cat or a dog. Even raccoons, foxes and pheasants have become great pets. In short, any animal, bird, reptile or fish that has been made a pet is eligible to have its picture sent to this competition. However, remember that such pictures must make an appeal and not represent merely a commercial record. Particular emphasis should be placed on some little trick or habit that is out of the ordinary.

In many homes a dog and a cat live together in the greatest harmony. I know of one case where the dog takes as much care of the cat's kitten as if it were a puppy. Moreover, as the kitten grows up it frolics about with the dog as freely as it does with the cat. However, let any strange cat or dog enter the gate and there is an immediate call to arms with the result that the strange cat or dog is soon scurrying down the street. It is no uncommon sight to see the dog, cat and kitten curled up and sleeping together peacefully. Any hour of the day this trio affords picture-material of an unusual and appealing character. Were it possible to devote the necessary time, many pictures of a high order could be made from such a combination of pets. Indeed, I know of one photographer who devoted several weeks to photographing the antics, poses and growth of five handsome kittens. At the end of this venture, he had about twenty-five really exceptional cat-pictures. Subsequently, many of these appeared on calendars of his own manufacture with the result that his work came to be in great demand. Obviously, no contestant can be expected to devote several weeks to obtaining a picture for this competition. However, my point was to call attention to the great value of the right combination of pets properly photographed. In this connection let me refer contestants to the admirable article "My Animals and My Camera," by Käte Hecht, in Photo-Era, March, 1914.

If unusual combinations of animals are unobtainable an unusual pet such as a raccoon, cub bear, fox or deer offers excellent opportunities to the intelligent camerist. The very fact that these animals are more often wild than tame, is an appeal that few can resist. Although the animals hold the interest of themselves, it is just as important as ever to use care with regard

to composition. Try to avoid a background of clapboards, shingles, bricks, picket-fences and other distracting vertical or horizontal lines. A clump of bushes, a flower-bed, a wheat-field or orchard may be utilized to advantage. Small animals are often photographed successfully indoors and the ingenuity of the camerist is put to the test to avoid distracting and detracting details.

Without a doubt, the reflecting-type of camera is best suited to the photography of domestic pets. The invaluable advantage of being able to watch the subject up to the moment of exposure enables the photographer to obtain the best and most natural results. Of course, other types of cameras may be used successfully and I do not mean to imply that they cannot be so used; however, the fact remains that the reflecting-camera is the best adapted to the subjects under discussion. Next in utility are those cameras that are equipped with a ground-glass focusing-back. These permit the camerist to focus accurately and compose his background, but with regard to catching the psychological moment—that is out of the question since by the time the plateholder is inserted the subject's position is apt to change. In using a camera of this type, the most satisfactory method is to focus and compose the background, then insert the filled plate-holder, remove the slide, and with wire-release or bulb in hand await the desired position of the subject. Roll-film cameras and other types that have no ground-glass back must be focused on a given point as accurately as possible by scale, and the subject must be placed at this point in order to register sharply at the time of exposure. A direct view-finder is of great assistance although, obviously, it cannot have any control over the focus. Why it is that some camerists believe that a clear image in the little finder guarantees a clear image on the plate, is one of the unanswered questions of amateur photography. To sum up the question of cameras suited to domestic-pet photography, there is no question that the reflecting-camera is supreme. However, other types of cameras may be used successfully provided that the focus, exposure and composition are carefully coördinated. Perhaps the greatest asset of all is technical and artistic ingenuity. By that I mean the ability to meet the unexpected problems that arise inevitably in this branch of photography. There are all manner of little expedients that may be used to gain a point, and the intelligent camerist should be alive to each and every one of them. Only by quick thinking and alertness can success be achieved.

There is one more important point to take into consideration. Some persons are better adapted than others to handle animals successfully. Unless the camerist can make friends with the pet to be photographed, his chances of success are reduced to the minimum. No animal will act or appear natural if it is frightened or distrustful. Sometimes, personality alone is responsible for the restiveness of pets, and whenever this is found to be the case the camerist had better seek other subjects. I do not mean to imply that the camerist's personality is offensive, but rather that his mental or physical characteristics are such as to arouse fear or suspicion. Some of the most refined and likable persons have an aversion to dogs or cats, and usually the dogs and cats reciprocate heartily. Fortunately, in most cases there is harmony and the camerist can devote his entire attention to his willing, although somewhat unruly subject. This competition offers many exceptional opportunities for initiative and originality. Moreover, it will be found that there is a peculiar fascination about working with one's pets.

A. H. B.

Lens-Terms Briefly Explained

(*Continued from September*)

Distortion

The rendering of the image out of true perspective. There is virtually no distortion with double lenses, and it is usually negligible with single ones, except in the case of straight lines falling near the margin of the plate. The perspective-effects obtained by having the camera too near the subject are sometimes called "wide-angle distortion"; but they are not actual distortion, being merely the inclusion of more than should be included from the view-point selected. This can be seen by trimming down the print, which corrects the "distortion."

Element

A photographic lens is usually built up of a number of separate glasses, each of which is spoken of as an element. When two or more of these are cemented together, or fixed in the same cell, they are termed a "combination." When a lens consists of a positive and a negative-portion, these are sometimes referred to as the "positive element" and the "negative element," even if each is a combination.

Fixed Focus

This is not a property of lenses, but a method of constructing cameras. No lens has a "fixed focus"; but to enable cameras to be made cheaply the focusing-adjustment is omitted and the camera fixed so that the image is sharpest when the object is at that distance at which it is most likely to be photographed. This is only applicable to small sizes for which lenses of short focus can be used, especially if such lenses do not work at a large aperture. With lenses of longer focus and larger aperture the depth of focus is not great enough for the method to be practical.

Flare-Spot

A circle of fog, which may be sharply defined or may be only a blurry patch, due to the lens forming an image of its aperture on the plate. It is sometimes spoken of as a "ghost-image" or a "halo." Flare must be present in some form with every lens, and the optician endeavors to distribute it over the whole of the image; but he cannot always do this for all extensions, and so a lens which does not show it on one occasion may manifest it on another. The fewer the reflecting-surfaces in the lens, the more can flare be reduced; hence it is found that single lenses, or lenses all the components of which are cemented together, give brighter negatives.

Focus

The focus is the point to which the rays that have come from some point in the object are converged by the lens. The term comes from the Latin for a hearth or burning-place; and an excellent example is to be found by concentrating the rays of the sun with a lens or magnifying glass on some inflammable substance. The "focus" of the rays will speedily become a "burning-place."

The verb "to focus" means to adjust the apparatus so that the lens forms as distinct an image as possible of the object which is to be photographed.

The "focal length" of a lens is often referred to as its "focus." This is not strictly correct, but custom has sanctioned such use of the term.



AFTER THE DAY'S WORK — J. HERBERT SAUNDERS

SECOND PRIZE—LANDSCAPE WITH FIGURES

Focal Length

The focal length of a lens is the most important factor to know, since it indicates the scale of the image which it will give from any particular position. The "focal length" is the distance from the node of emission to the screen when the lens has been focused for parallel rays, or for some object at infinite distance. The sun, optically considered, is infinitely distant, and the focal length of a magnifying-glass is the distance from the focus of the sun's rays to that particular point in or near the lens which is called its node.

From the same standpoint, the size of the images of an object given by different lenses is strictly proportional to their focal lengths.

The focal length is sometimes called the "focus," or the "equivalent focus."

The focal length is measured to the "node of emission," as just stated. If instead of measuring to that point we measure to the nearest part of the glass, or of the lens mount, we get a dimension known as the "back focus"; it is useful to know this, as it governs the dimensions of the camera in certain respects. There is no hard and fast connection between "focal length" and "back focus." Two lenses may require to be at exactly the same distance from the focusing-screen, and so would have the same "back focus," yet the size of image in the two cases might be different, showing that the "focal lengths" were not the same.

Hyperfocal Distance

The "hyperfocal distance" is the distance of an object on which the lens should be focused in order that distant objects shall appear sharp, and the sharpness extend as far into the foreground as possible. The hyperfocal distance varies with the aperture and with the standard adopted for the circle of confusion.

To find the hyperfocal distance, the focus of the lens in inches is squared, multiplied by one hundred—if the circle of confusion adopted is one hundredth of an inch—and divided by the F/ number. Thus the hyperfocal distance for a $5\frac{1}{2}$ in. lens working at F/6.5 is found thus:

$$5\tfrac{1}{2} \times 5\tfrac{1}{2} \times 100 \div 6.5 = 466 \text{ inches (about)}$$
$$= 38 \text{ ft. } 10 \text{ in. or, say, } 40 \text{ feet nearly.}$$

So that a $5\frac{1}{2}$ in. lens focused on an object 40 feet away will give the distance approximately sharp, and the sharpness will extend as far into the foreground as possible. In fact, it will extend to within half the hyperfocal distance; objects not less than 20 ft. from the camera will be as sharply rendered as distant objects. This only applies to the center of the field of the lens; with the edges of the field other considerations arise, and it is not practicable to calculate beforehand the depth of definition in this way.

Rectilinear

A lens is rectilinear when it does not distort the image; that is to say, when a straight line in any part of the subject is rendered as a straight line in the image. A well-known type of lens is the "Rapid Rectilinear"; a modification of this is known as the "Wide-Angle Rectilinear." These are the two best-



IN WINTER WOODS — G. H. SEELIG

THIRD PRIZE—LANDSCAPE WITH FIGURES

known types of lens which embody the word "Rectilinear" in their names; but all good anastigmats are rectilinear in the true sense of the word.

Spherical Aberration

A defect in lenses originating in the fact that for workshop reasons it is necessary that their surfaces shall be spherical, whereas theoretically they should be parabolical. The result is that, unless corrected in some way, the central part of the lens brings the rays to a focus at a point further from the lens than the marginal parts of the lens do.

A lens of this kind must be focused with the stop that is going to be used. Stopping down corrects spherical aberration. Good photographic lenses are conspicuously free of the defect; but it is remedied in them, not by attempting to depart from spherical surfaces, but by combining glasses which possess the fault in opposite directions and thus neutralize it in each other.

Symmetrical

A lens is symmetrical when it consists of one or more pairs of identical glasses placed symmetrically on each side of a central stop. A symmetrical lens is of necessity "rectilinear" (*q. v.*); but a lens may be rectilinear and yet not in the strict sense symmetrical.

"U.S."

The initials "U.S." stand for "Universal System," a method of numbering lens stops introduced many years ago by the Royal Photographic Society and since withdrawn, but used on many Kodaks and some other popular types. It is designed in order to indicate the relative exposures that are required by the different stops, the aperture of the average portrait lens (F/4) being taken as the unit.

So that F/4 is called U.S.1, F/5.6 U.S.2, F/8 U.S.4, F/11 U.S.8, F/16 U.S.16, F/22 U.S.32, F/32 U.S.64, and F/45 U.S.128.

An easy way to translate the U.S. into the F/- system is to remember that F/16 is U.S.16, and that the ordinary F/- numbers in use, 8, 11, 16, 22, 32, and 45, each requires double the exposure of the one below, and so the U.S. numbers double also.

Wide Angle

A wide-angle lens is one which in proportion to the size of the plate it will cover is of short focus. What proportion constitutes a lens a wide angle one is a matter of opinion, to some extent; but it may be taken that if the "angle of view" is much greater than 60° the lens is a wide-angle lens. Many modern anastigmats can be used as wide-angle lenses, as by stopping down they cover a much larger size than that for which they are supplied to work at full aperture.

R. L. Horton, in *Photography*.

In a Hurry

Among the passengers on a trolley-car was a photographer with but five minutes to get to the scene of a serious automobile-accident. Getting very fidgety, the camera-man inquired of the conductor: "Can't you go faster than this?"

"Yes," said the conductor, "but I have to stay with my car."

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY

Photographing Military Buttons

At the present time the number of men in khaki who come to be photographed form a very large proportion of the sitters, writes E. H. in the *British Journal of Photography*. The men are doubtless proud of their uniform and many look very smart. The operator notices that they take a great pride in polishing their buttons and badges, especially the one on the cap. These look very showy, but the shine on them makes them come out very badly in the photograph, and under some conditions of lighting one cannot tell in the finished portrait what regiment a man belongs to. This can be overcome easily by keeping in the studio a piece of soft glazier's white putty, not too sticky, but just pliable. This is rolled into a ball and the badges and buttons, etc., are just gently dabbed with it. It gives just for the moment a nice frosted-glass appearance which photographs splendidly, and the resulting picture is sure to please, showing the badges quite clear and full of fine detail. A little rub of the duster over the badges, etc., before the sitter leaves removes all traces of the putty, and the whole operation takes up only a few minutes extra time and makes a vast difference to the results.

A Hydroquinone-Metol Developer for Snapshot-Work

A developer which is eminently suitable for snapshot-work, and one which will yield a good black-and-white negative of strong contrasts, can be made up according to the following formula (writes F. H. B. S. in the *Amateur Photographer*):

A.—Hydroquinone	25 grains
Metol	25 grains
Metabisulphite potash	60 grains
Potassium bromide	10 grains
Water, to	10 ounces

The metol should first be dissolved in cold water, the metabisulphite should then be added, and the other ingredients afterwards.

B.—Sodium carbonate	1 ounce
Water	10 ounces

For use, take equal quantities of A and B. If desired, Monomet can be employed in place of metol in exactly the same proportions. It will give practically identical results, the only difference (if any) being a slightly increased density, which in this class of work is usually all to the good.

Tests for Washers

In purchasing a washing-tank for negatives or prints, the photographer will naturally look for such features of construction as durability and, in the case of a washer for prints, freedom of liability to tear prints or allow them to clot together in masses which do not then obtain free action of the current of water. But perhaps many do not realise that the crucial test of any washing-apparatus is the speed and completeness with which the water in the washing-apparatus at any given time is removed and wholly replaced by fresh. A very simple test of the efficiency of a washer in this respect is to add to the water any solution which will color it strongly and then to note the time, with the washer in action, which is required for the color to be entirely removed. A little strong solution of potassium permanganate can serve for this purpose, although in the case of some waters the water itself may discharge the color. If that is so, a little red ink may be used for the same purpose, the method being to tint the water to a fair extent and then, without any prints or negatives being in position, to note the time which the washer requires to be run before the color has disappeared entirely from the water. A test such as this is one which anybody can carry out, and it serves to distinguish the efficiency of one washer from another.

British Journal of Photography.

Photographic Uses of Vaseline

A little vaseline rubbed into the fingertips, which are then wiped almost free of it, is a capital preventive of stains from developing with pyro. A trace of vaseline rubbed over the ground-glass, and then similarly wiped off, makes it more transparent, and causes the grain to seem much finer; it is a distinct help when focusing. Vaseline can also be used for making paper-negatives translucent, whereas if a stopper is treated in the way described for the focusing-screen, it is prevented from sticking.—*Photography.*

Switches on Darkroom-Lamps

Manufacturers of late years have consulted the convenience of the photographer in so many matters of practical equipment that it may seem ungenerous to say anything which is in the nature of unfavorable criticism. A minor point which, however, has come within our notice, in one or two instances of late relates to the very convenient form of electric darkroom-lamp which is fitted with a three-way switch, a turn of which actuates either the electric bulb in the interior of the lamp or one placed outside upon the top to provide white light within the darkroom, whilst in the mid-position both are extinguished. We have wondered by what perverse motive a manufacturer has been prompted to fix the switch so that the knob is moved horizontally; that is, from front to rear of the lamp, or vice versa. When so placed, one is always in doubt which position corresponds with the inside and which with the outside lamp, and it is easy to make a mistake when moving the switch from the midway position when neither lamp is in action. This drawback would be removed by the mounting of the switch so that it is operated up and down, the up position of the lever corresponding, of course, with the upper bulb outside the lamp chamber. A thing like this is quite a minor affair; but it is just as easy to fix the switch one way as the other, and the convenience to the user is immensely greater when the arrangement is such that the movement of the switch lever is itself an indication of which bulb will light.—*British Journal of Photography.*

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value, $2.50.
Second Prize: Value, $1.50.
Honoroble Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous"***; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than one year's practical camera-activity, and without any practical help from friend or professional expert. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4}$ x $3\frac{3}{4}$ to and including $3\frac{1}{4}$ x $5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition
Closed July 31, 1918

First Prize: T. Lindsey Fitch.
Second Prize: Richard Webber, Jr.
Third Prize: E. H. Smith.
Honoroble Mention: Geo. P. Eaton.

Change in the Beginners' Competition

THE Publisher is fully aware that the character of this competition calls for a change. By having permitted workers to enter prints here that have never been in a competition elsewhere, he has given a generous scope and wide interest to this competition, which appears to have won general approval, judging by the number of participants. Of late, however, the pictorial standard of contributions to this competition has been of a very high order—so much so, indeed, that real beginners have been crowded out.

In future, this competition will be limited to actual beginners, but not to those who have been using their cameras only a few weeks. Competitors must have had some really practical experience in pictorial selection, developing and printing. Those who make only the exposures, entrusting the photo-finishing to others—friends or professional experts—are not eligible; neither are workers of over one year's camera-activity. Past and future participants who have won a first prize in the Beginners' Competition automatically drop out, but may enter the Competition for Advanced Workers. The three prizes, offered in the Beginners' Competition, will be continued as heretofore.

Drying Roll-Films

THERE are many good methods to dry films that can be devised. We use and recommend the construction of a small drying-room which can be made of compo-board with strips or crossbars at the top from which pointed metal-pegs project and the films to be dried are hung thereto by piercing them to these pegs or film-clips. Wood photo-clips or any other means can be used to attach to these crossbars, from which the films are hung. Instead of the top crossbars an ordinary wagon-wheel can be fastened at the top of the drying-room and arranged with clips or pegs, as outlined above, from which the films may be hung. By fastening the wheel so it can be turned, any individual film can be found or unfastened without disturbing any of the rest.

It is dangerous to dry films with hot air as there is great danger of the emulsion becoming soft and running; furthermore, films will not dry neat and perfectly flat, which makes them difficult to print satisfactorily. Dry warm air is the best and proper way to dry films as it dries them rapidly and perfectly flat. We use a gas-heater on the outside and at the bottom of the drying-room, over which is placed a large galvanized iron-elbow or pipe, and the warm dry air is drawn into the drying-room with the aid of a 12-inch electric fan; the air finds its way out at the top of the drying-room through narrow openings for this purpose.

Northern Photo-News.



MEMORIAL BRIDGE, LOUISVILLE, KY. T. LINDSEY FITCH

FIRST PRIZE—BEGINNERS' COMPETITION

The Photographic Harvest

Most beginners are now at home and vacation-days are virtually a thing of the past. Photo-finishers and the amateur photographers are developing and printing many thousands of films and plates—what is the harvest and what will the beginner do with his tithe? The average tyro gives the matter little thought; but, in reality, much of his future photographic success depends on his decision. There will always be those who will show their friends a few prints until the novelty is worn off and then promptly lose the prints, tear them up or forget all about them. Incidentally, what small stock of practical and useful photographic information that they may have obtained during the vacation is thrown away or forgotten along with the prints. Such a photographic harvest is neither of value nor patriotic.

Times are too hard to *waste* photographic material, even if the beginner has no intention to improve his knowledge. Every beginner who *putters* with photography is literally robbing some ambitious worker of the photo-materials he deserves to use. To-day, there can be no halfway or vacillating position. Either enter the ranks of beginners who "mean business," or seek other non-essential activities. Remember that the combination of high prices, reduced output and taxes will make amateur photography prohibitive unless every beginner, amateur and professional, *saves as he never saved before*. This warning I base on facts. It is positively not due to pessimism. Conditions will improve in time; but it is the present and not the future with which we have to deal. If we can bridge the present by strict economy, future abundance becomes assured, but in no other way.

Let us assume that every reader of Photo-Era "means business" and that he wishes to utilize his photographic harvest to the best advantage. Of prime importance is the ability to separate the chaff from the wheat—to know the underlying reason for failure or success. If the earnest beginner returns to his home with one hundred negatives and twenty per cent are of no value and eighty per cent are good, why were the twenty per cent lost? Take these twenty negatives where you can be alone and spread them out before you. Dig into your mind thoroughly and be honest with yourself. If you forgot to turn the roll of film or if you neglected to pull out the slide, *admit it*. You can gain nothing by attempting to hide your errors, because sooner or later the day of reckoning will arrive and you will stand revealed in the pitiless glare of publicity.

The next step after a thorough self-analysis is to arrange the good prints in consecutive order. If your vacation was spent on a farm, do not show your friends pictures of the house before you show them one of the railroad-station, or a picture of your departure before you have given them a pictorial account of your hay-rides, berry-picking and horseback-riding. Be logical about your arrangement. Suppose that a lecturer projected his lantern-slides on the screen without regard to sequence. To all intents and purposes, you are a lecturer and you are trying to tell your friends about your vacation by word and picture—*do it right*.

There are many excellent methods to preserve pho-

tographs that constitute a pictorial record of a vacation. Perhaps, the best is the well-known photo-album. However, there are albums *and albums.* Unless you wish to run the risk of losing your prints, do not purchase a cheap album until you know positively that the paper and binding are *chemically pure*—that is, free of any chemical that may cause discoloration or fading. It is cheaper in the end to purchase a leather-covered album made by a reputable photo-album manufacturer whose guaranty may be relied on. Since photo-albums may now be obtained in many styles, I would suggest that if fifty pictures composed the pictorial record of your trip that you purchase an album of fifty pages and then have a bookbinder stamp title, date and your name in gold on the cover. Needless to say, it is not necessary to purchase a seven by nine book for a 3¼ x 4¼ picture unless it is your intention to put two pictures on a page. Of course, if you have enough pictures to fill an eleven by fourteen album, four pictures to a page, all very good; but in general a small, neat album is handier, more economical and more generally useful.

It is essential that every print bear a title so that the presence of the camerist is not required whenever the pictures are shown. Some workers allow a greater margin at the bottom of their prints and write the title in black ink or with a typewriter on the print itself. Others use white crayon or ink. By referring to the advertising pages of this issue, you will find a white ink advertised that has positively made good and which is without doubt one of the best to title and describe prints in photo-albums. Some camerists purchase albums with light-colored or even white leaves so that they may use ordinary ink. However, in practice these light-colored albums soon become soiled and hence are very unattractive souvenirs.

With regard to finishing your own exposed plates and films—do so by all means provided that you can obtain results without a disproportionate use of photo-material. Far better to let the photo-finisher "do the rest" and save waste than for you to *experiment* and, perhaps, be obliged to send your plates and films to the photo-finisher in the end. Remember that for the time being those who know should have preference over those who must learn. However, there is no reason why the intelligent beginner should not do his own work—do it well—and save, too. My word of caution is addressed to those who like to dabble to pass the time. Just now, this is tabooed

My idea—roughly expressed as it is—is to urge every beginner to harvest his crop of photographic knowledge to the best advantage. Let every negative, print and enlargement teach a lesson that will help toward photographic success. Arrange the summer's work neatly, logically and attractively so that "those who run may read" of your efforts. Even as a golfer strives to beat his score of the day before, so make each succeeding effort better than the last until the tyro-days are a thing of the past. Let the photographic harvest of 1918 become the stepping-stone to a greater insight and love of photography. A. H. B.

Honor in Self-Sacrifice

When thought is given to a prospect of decisive victory, do not forget that the distance from Chateau-Thierry to the Rhine is more than 200 miles. *We shall get there*—whether by way of Alsace-Lorraine or Rhenish Prussia does not matter—*we shall get to the Rhine.* Our victory is sure. But we must work for it, fight for it, give ourselves, every one, whole-heartedly to the high, hard task which the principles of national freedom require Americans to perform.—*The Boston Herald.*

Tilting the Camera

With regard to tilting a camera R. M. F. has this to say in *The Amateur Photographer:* It is amazing how frequently we find that photographers display anxiety and considerable patience to get the camera exactly level in landscape-work. It does no harm to tip the camera in an upward or downward direction, provided that the picture has no straight lines. Recently the writer made a couple of exposures, one with the camera tilted up considerably, and the other with it dead level, upon a landscape-subject. The resulting prints showed not the slightest difference between the one and the other, save for the fact that the tipped-up exposure had a slightly longer focus-effect by reason of the foreground being excluded. Then again, it is not generally known that it is often a good plan to tip the camera slightly in a horizontal direction when dealing with very flat landscapes.

Removing Glass-Stoppers

The removal of glass-stoppers is not always a simple matter, particularly when such stoppers stick. A correspondent in *The Amateur Photographer* gives several helpful hints. In using glass-stoppered bottles precautions should be taken to prevent the stopper sticking, and liquids prone to give this trouble, such as solutions of the caustic alkalis, should be kept in bottles with rubber-stoppers. Rubber-stoppered bottles are generally more satisfactory for most photographic solutions. When glass-stoppers are preferred, the inside of the mouth of the bottle should be smeared with a little vaseline. Stoppers should never be ground in. A well-made stopper will perform its functions perfectly when loose enough to be removed and replaced by grasping with the little finger of the left hand in the usual manner of the chemist. When a stopper is found to be stuck there are several ways to deal with the difficulty: (1) *Patience.* (2) Tapping the edge of the stopper gently on the beneh. (3) Striking the head of the stopper sharply with the handle of a penknife although holding the back tightly with the thumb. This should be done lengthwise with narrow-headed stoppers, to give the greatest resistance and lessen the possibility of knocking off the head. (4) Hot water poured on the neck of the bottle will cause the neck to expand before the stopper. (5) Heating over a flame is a more risky variant of this. (6) A little thin oil round the mouth, warming gently for a time, and "gentle persuasion," will often move the stiffest cases.

An Appreciation with a Few Hints

Shelton, Conn., June 30, 1918.

Editor Photo-Era Magazine.

Dear Sir:—

I wish to express my appreciation of the article on "The importance of correct exposure and how to obtain it," by Allen Edwin Churchill, appearing on page 290 of your June issue.

My own experience has taught me that the first requisite for a final perfect print is a properly exposed negative. The average amateur can not expect to improve by individual tray development with formula modifications and other "doping" on the results of a properly exposed negative developed in a tank, paying strict attention to the instructions, time, temperature and formula of the professional photo-chemists such as Eastman and other well-known

SECOND PRIZE

BEGINNERS' COMPETITION



THE GATE OF THE FOREST — RICHARD WEBBER, JR.

plate-manufacturers employ. Since the acquisition of a tank several years ago my development-results are uniformly successful. But I could not say this of my exposures. The dense, gray ghost of overexposure seemed ever on my tracks. Prints from such negatives took too long and were not perfect; enlargements were entirely out of the question.

So I added to my photographic paraphernalia—my wife's favorite club for a new hat—an exposure-meter using sensitized paper-disks. Armed with this exposure-meter, I set forth to do deadly combat with my arch-enemy—overexposure. After the first disappointment, I learned that one half of the exposure indicated on the meter would give satisfactory results. The use of such an exposure-meter should be tempered with judgment. While for the average landscape one half of the indicated exposure may be found correct, if we wish to photograph a distant view with the camera set up under some trees and read the meter there, one third of the exposure shown would be sufficient. On the other hand if we read the meter on a sunlit road when photographing a shady nook an exposure equal to the full time shown should be given. In addition I found the keeping of an exposure-record of great help. Particularly convenient for this purpose is the use of film-packs, as they automatically furnish you, after every exposure, with a stub which will take all necessary data. Be forewarned, do not use your fountain-pen; after the ink has dried on the black paper, no one can read what you have written. The Premo film-packs have the films themselves numbered, so positive identification of your data on the stub with the developed negative is made easy. I personally prefer plates; but for study of exposure and an accurate record of reliable data I found it well worth while to sacrifice temporarily my liking for plates and use film-packs until I shall have accumulated sufficient information and experience to obtain 100% perfect exposures.

I agree with Mr. Churchill, and am convinced that the proper and judicious use of a meter together with the study of your own shortcomings or successes from reliable records will be the surest foundation for the success of the subsequent manipulations and resulting, finally, in that ideal enlargement which some day you hope to enter at one of the photographic exhibitions.

With my best wishes for your continued success, I am

Respectfully yours,

ELMER LUCE.

ANSWERS TO QUERIES

Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.*

F. C. K.—**Optical glass is affected to a greater or lesser degree by light and atmospheric conditions.** Some glasses are more sensitive than others. As a rule, the anastigmat lenses are apt to be affected more than cheaper lenses because high-grade lenses receive a higher polish. It must be remembered that highly polished optical glass closely resembles highly polished steel in that light and moisture cause corrosion. In some cases, lenses that are protected carefully never show discoloration or other defects—even after years of service. The photographer should see to it that his lens is always capped or otherwise protected from light and moisture when it is not in use. You should never leave a camera and its lens exposed to direct sunlight, for by so doing you may not only fog the unexposed plates or films, but cause serious damage to the lens.

W. O. C.—**There are three general types of lens-construction mentioned in lens-catalogs.** An unsymmetrical lens is one whose front or back combination, usually, may not be used alone. A symmetrical lens is one which permits the use alone of either front or back combination. As a rule, both are of the same focus. A convertible lens is one in which the front combination is of a different focus from that of the back combination—thus giving three focal lengths in the same lens. To illustrate: an unsymmetrical lens might be of 6-inch focus only; a symmetrical lens of 6-inch and 12-inch focus; and a convertible lens of 6-inch, 9-inch and 14-inch focus.

J. S. R.—**With regard to a Bausch & Lomb Plastigmat F/6.8 lens as compared to the newer low-priced F/7.5 lens,** we beg to state that if you intend to confine your photographic work within the scope of an ordinary roll-film camera, and do not intend to use the lens to copy, enlarge or do telephoto work, we believe that the lower-priced F/7.5 lens will meet your requirements efficiently.

On the other hand, if you intend to do several kinds of photographic work with a long bellows-extension, rising and falling front and other attachments for serious photography, we believe the B. & L. Plastigmat will serve you to better advantage. The F/7.5 lenses are specially made for use on roll-film cameras and for that purpose they are in most respects equivalent to the high-priced lenses; but should you use one of these lenses on a different equipment, such as a high-grade long-extension plate-camera, the lenses would not cover satisfactorily, nor would they serve you as well.

M. K. W.—**It is not necessary to cut apart roll-film negatives to dry.** It is customary to keep the negatives in the strip until developing, fixing, washing and drying are finished, then each negative is cut off ready to print. Some prefer to cut the exposures in order to develop each negative by itself. However, this is of no particular advantage unless the various exposures are of such a nature as to require individual attention. The modern developing-tank and the correct amount of developer will usually take care of all ordinary variations of exposure.

S. D. O.—**Whether or not the use of F/3.5 anastigmat lenses is to be advised generally is a debated question.** The great speed of the lens permits exposures to be made under conditions which would render slower lenses useless. On the other hand, how many times does the average amateur-photographer attempt to make pictures under conditions which an F/6.3 or F/4.5 lens would not take care of efficiently? When all is said and done, the advisability of using an F/3.5 lens is a question to be decided by the individual. An important factor in the decision should be the ability of the amateur to use such a lens successfully.

W. K. B.—**A shutter-speed of 1/300 of a second will stop all ordinary moving objects.** Without a doubt the focal-plane shutter is the most efficient for high-speed photography. However, successful diving, running, baseball, football and airplane pictures have been made with a between-the-lens shutter working at a maximum speed of 1/300 of a second. In making speed-pictures with a between-the-lens shutter the photographer should select his angle of view carefully, so as to avoid having the subject pass the camera at right angles.

A. G. S.—**For finishing prints with a glossy surface, a paper prepared with a natural glossy surface should be employed.** The most simple and satisfactory method to work is as follows: The prints, after fixing and washing, should be immersed in a formaline bath—formaline ½ ounce, water 5 ounces—for two or three minutes, washed for a quarter of an hour and then dried. A glass, celluloid, or ferrotype plate is washed and polished with a soft fabric, first rubbing on with a flannel a solution of 20 grains of beeswax in 1 ounce of turpentine. The print is soaked in water until thoroughly limp, and then a liberal quantity of water is thrown on the polished plate, and the print placed face downwards on the plate, care being taken that there is plenty of water between the two surfaces. The print is next firmly squeegeed into contact, interposing a sheet of rubber cloth between the print and the roller squeegee. When quite dry, the print will leave the plate very easily, and its surface will possess a high gloss. This surface is hard and durable, due to the employment of the formaline-bath, but it is well to back the print with a waterproof sheet so as to prevent the mountant from affecting the glaze. This method has proven to be efficient and eminently successful in actual practice.

R. S. P.—**There are as you say many conflicting statements regarding the correct time of washing dryplates and films before drying.** A considerable amount of investigation in this direction has been conducted by the Research Laboratory of the Eastman Kodak Company with the following results: (1) The rate of elimination of hypo depends very largely on the agitation given to the water, the rate being twice as rapid when the water is rapidly agitated as when stagnant. (2) The rate of elimination is practically independent of the temperature, no difference being observed between measurements made at 65°, 70° and 80° F. (3) The elimination is very rapid under all circumstances, the amount of hypo in the film being halved every two minutes if the film is left stationary, and every one minute if rapid agitation is ensured. Consequently, with complete agitation in an adequate supply of water, the film may be considered to be free of hypo in ten minutes, while if the agitation is less complete, twenty minutes is still sufficient. Opinions to the contrary notwithstanding, hardening with chrome alum, ordinary alum or formalin has very little effect of elimination.

PRINT-CRITICISM

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.*

E. H. K.—"Springtime Path" is marred by a large group of tree-trunks at the right, placed conspicuously in the foreground. If trimmed away, it would leave an attractive picture of a road leading into the woods and disappearing there.

J. A.—Your "Mystery of Winter" does not appear to have more than a personal interest. The two masses of ice-covered branches, nearly the same size, side by side, create a theme of divided interest, so that the beholder does not know which of the two masses he is to admire more. The composition is not very successful, although the tonal effect is good.

A. J. J.—The little girl, interested in a picture-book that lies on the table before her, is unfortunate in that her face is too near the book, which would prove to be a very early ocular defect or a bit of carelessness that would soon cause one. The arrangement of the child at the table is likewise unfortunate, as the right arm, sleeve and dress merge into one. Besides, the child moved during the exposure, leaving the chair behind her quite sharply defined and unduly conspicuous. The book, too, is out of proportion to the rest. This is a very familiar theme, but not very well executed.

I. C. S.—Your picture, "Fluted Columns," suffers by being overexposed, unless the film or the paper has been fogged. The effect is flat and monotonous, quite out of keeping with a building so near and so conspicuous.

M. M. E.—Your portrait of a child with bare legs, facing the camera, is marred by distortion, the limbs appearing as twice normal size. This could have been avoided by using a lens of longer focus, which latter should be about twice the diagonal of the plate or film used.

G. F.—The trouble with your open-air orchestra is that the trees forming the immediate background are as numerous as the members of the band. There appears to be one tree for each musician. The background is "very busy" with its many scattered trees. It is difficult to distinguish the members of the orchestra from the trees behind them, and the lighting is somewhat flat and monotonous. All the musicians are gazing into the camera, except one—in the foreground. Is this fair?

F. G.—"The Mountain Road" suffers by having the end of the road appear exactly in the middle of the picture, this focusing-point dividing the picture in two equal parts—two separate pictures. You can either cut off a large portion at the top and have an attractive road-view, or cut off a portion of the road and have a still more attractive picture. Technically, the picture is excellent.



THE OLD WOOLEN MILL — E. H. SMITH

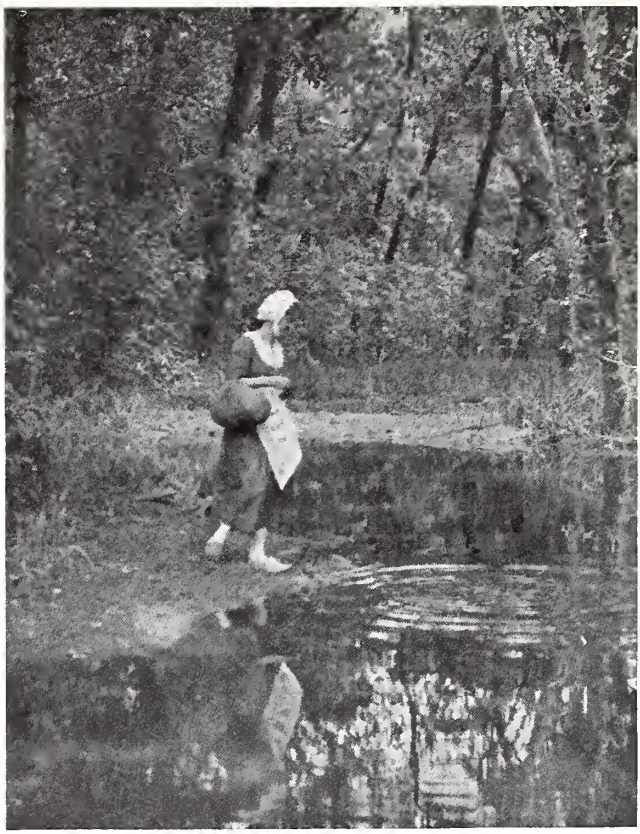
THIRD PRIZE—BEGINNERS' COMPETITION

E. L. A.—Of your three prints "The Frozen Stream" is generally most pleasing—the crispness of winter-sunlight and shadow being very well rendered. Could the tree-trunk which cuts across the upper left-hand corner have been avoided, the composition would have been much improved.

D. V. S.—In "A Pan-American Work of Art" the background is unfortunate, as the architectural lines of the tower are confused with those of the statue, which, we believe, might have been photographed from another viewpoint to better advantage.

"Goldfish" appears to be considerably underexposed, no doubt because of the movement of the fish, and the result is the unrealistic darkness of the draperies.

OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

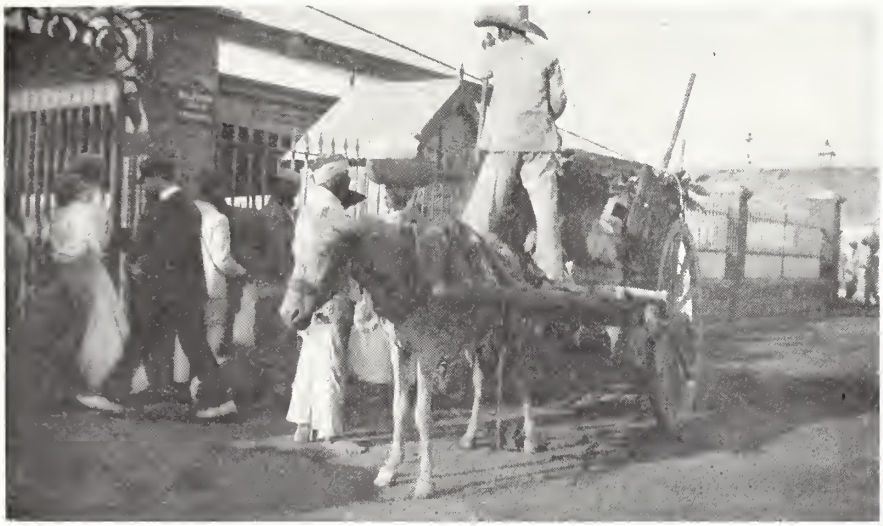
MANY of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general, that, in order to stimulate and help develop this valuable faculty, we have introduced this competition. It consists of the reproduction of a photograph lacking good composition. To him who sends us the best criticism, before the twentieth of the current month, we will send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson; price, $1.50. In the event of several criticisms (not exceeding three) being satisfactory, they, too, will be awarded copies of the book.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his book.

Successful Criticisms

HIGHLIGHTS are badly distributed. Cover up the light figure at the extreme left with one thumb, and the white patch at the right with the other thumb. Gray over with a soft pencil the second white figure at the left. This leads to greater simplicity and concentration. The geometric arrangement of roofs and fence is hopelessly irremediable. Too bad that the man on the cart has lost part of his hat! At best, we have merely the rear view of the man standing in the cart and talking to somebody about something; but the



THE PICTURE CRITICIZED THIS MONTH

motive and purpose are confused and distracting. Not a well-composed picture carrying a definite, main idea with suitable subordinate accessories.

E. L. C. Morse.

The first impression received on viewing this print, is that certain individuals have been seized with an impulse to quit the scene by the nearest exit. The gentleman, standing in the cart, with his back impolitely turned to the spectator, apparently, is about to climb out through the top edge of the picture-space, leaving the drowsy burro to the tender mercies of a short-focus lens. The use of a larger stop would tend to prevent the confusion resulting from the equal definition shown in middle-ground and fore-ground. The longer exposure thereby produced, would probably help the general effect. The figure in white, behind the animal's head, could be advantageously eliminated. Aside from the violent fore-shortening, the burro and cart are well placed in the composition, and the distribution of light and shade is pleasing.

Chas. A. Hughes.

A variety of criticisms can be offered concerning "A Market-Day in Jamaica." Especially displeasing to the eye is the iron fence which is not perpendicular. This could have been easily remedied by proper trimming. The two persons at the extreme left hurrying out of the picture is also annoying to the eye and would suggest trimming off about an inch and a quarter from the left of the picture. The amputation of the hat is also unfortunate. I think that this picture could have been improved with a little patience and watchful waiting so that the principals would be better placed.

A. Olsen.

A poorly selected viewpoint. Camera too close to subject thereby cutting off top of man's hat. Background comprises too many disturbing elements—the glaring white roofs, the vertical lines of the picket-fence, the gate and the individuals entering same. These all tend to divide interest with the main subject of the picture, and could have been eliminated, had the view been taken from the gateway far enough back to have gotten in all of the man's hat. A better view of the man standing near the burro and the woman carrying her basket would also have been obtained, which, together with the driver and his outfit, would have made a very interesting picture. The placing of the subject in the center is bad. Tonal values good.

O. J. Lewis.

To my mind, the relationship existing between the title, and the scene depicted, in "A Market-Day in Jamaica," is not harmonious. It is to be supposed that, in order to fully comply with the meaning of the title, it would be necessary to show some sign of produce or trading, the lack of which is evident. As regards the composition of this picture, I should say that it was faulty. The predominant interest seems to be centered in the burro and cart, the former being taken from an unfavorable vantage-point. Also, there are so few people in the scene, that one could hardly believe it was market-day, unless so informed. The lights and shadows blend very well. Considering the color of the burro, which I take, is white, I think the tone is brought out as well as could be expected.

Dan G. Loomis.

This is simply a record-picture. There seems to be no composition or motive. The only good points about it are that no one is looking at the camera, and that the printing has been nicely done on soft paper. The shadows and the general tone are good. A part of the people seem to be walking out of instead of into the picture; the man on the cart has a part of his hat clipped off and there is a jumbling of figures and objects throughout the greater part of the picture.

Geo. W. French.

OUR ILLUSTRATIONS

WILFRED A. FRENCH

In contemplating George R. King's picturesque view of a mountain-path on Mount Desert Island, which embellishes the front cover and the letter-press, this month, the traveled reader is reminded of the scenery that characterizes the Western side of the United States, the Pacific Coast, where Mr. King has also photographed to a considerable extent. The present picture is typical of our most recent National Park, to which frequent refcrence has been made in these pages. It is a straightforward, vigorous representation of rugged country that makes a strong appeal to the camerist, who, for obvious reasons, will find it worth the while to explore the promising regions of this inviting public pleasure-ground. He will not only find individual delight in these camera-excursions, but perform a valuable service in making his friends at home, and the public as well, familiar with a miniature Yosemite Valley within easy reach of tourists that dwell in the Eastern section of this country. Mr. King's picture offers no excuse for serious criticism. The pictorial design is virile and impressive, and the brilliant chiaroscuro is scarcely impaired by the several strong highlights each side of the path. Data: July; 2 P.M.; sunlight; Seneca, 8 x 10; 12-inch Collinear; F/32; one second; three-time color-screen; 8 x 10 Orthonon; M. Q. developer; Azo contact print.

The figure of a young girl, by C. E. Soderstrom, frontispiece, affords a grateful study of pleasing, graceful lines. The lighting, throughout, betrays masterly skill, and artistic judgment marks the placement of the model and the management of the background. Data: June; noon; bright; 3¼ x 4¼ camera; 5-inch Cooke, series II; 1/400 second; Seed 30; pyro-acetone; enlarged from 3¼ x 4¼ on P. M. C.

The application of photography to book-illustration, display-advertising, and the like, in place of the work of the professional draftsman or illustrator, has become a distinct and successful vocation; but in the particular field of picturing a given theme in an eminently artistic manner, the Lejaren à Hiller Studio is preëminently successful. Witness the composition prepared for an advertisement of the Resinol Chemical Company, of Baltimore, Md., which appeared in a recent issue of *Harper's Bazar*. For the privilege to republish this highly original and expressive camera-picture, PHOTO-ERA is indebted to the Resinol Chemical Company.

As the eye of the beholder passes from the attractive maiden seated thoughtfully before her dressing-table, to the group which her mind sees reflected in the mirror, and back again, the story of yesterday is soon revealed. Whatever the beginning of this *affaire du coeur*, its development and inevitable *dénouement*, the beholder may picture to himself. And yet, the person with a fertile imagination might consider the group in the mirror the reflection of a little episode taking place behind the "leading woman" in the play. The conception of this engrossing and attractive theme, as well as its execution, bears testimony to an unusually gifted and accomplished artist-photographer. I am betraying no confidence in suggesting that the mirrored group is the result of double-printing.

The example of the work of John Paul Edwards, photo-pictorialist and Salon-exhibitor, promised to readers of PHOTO-ERA last month, appears on page 175. It cannot be denied that Mr. Edwards merits the high encomiums bestowed upon his pictures by professional art-critics. As for myself, I can only confirm the high estimate these commentators have placed upon his artistic achievements. Novelty of pictorial design, artistic composition and direct, unaltered photography are notable qualities of Mr. Edwards' work, including the graceful composition entitled "Sunday Morning on the River." A collection of 38 prints representing the pictorial and technical skill of this artist, was shown at the rooms of the B. Y. M. C. U. Camera club, 34 Boylston street, Boston, for two weeks in September, and created wide-spread interest.

In "Bella Donna," page 176, no one will fail to recognize an example of strong, distinctive and pleasing portraiture, though a professional photographer might wish that the eyes were turned somewhat towards the camera, to impart a greater degree of animation to the face. In any event, the portrait is very creditable to the skill of John H. Stockdale, who is president of the Photographic Club of Baltimore. Data: Studio-camera, 8 x 10; Artificial light; 14¼-inch Verito; F/4; 5 seconds; Standard Polychrome; pyro.

Our occasional but always welcome contributor, H. B. Rudolph, appears for the first time, in PHOTO-ERA, as author of a practical and entertaining article. The story he tells is all the more pleasing, because of the varied character of his illustrations, thus enabling one to note his versatility as a pictorialist. The eminently delightful group, page 181, may safely be regarded as his nearest and dearest. How else could the artist produce such a felicitous combination of maternal affection and conjugal sympathy? Skilful distribution of the light has resulted in a soft and pleasing appearance of the fleshtones and admirable modeling throughout. The setting furnished by the dark draperies imparts striking relief to the emerging group. A result like this is one of the advantages of home-portraiture.

The typically domestic scene, "So Big!" is one of those pictures of baby-days that can be made only in the home and will be cherished as priceless mementos by the mother. The same is true of *pater familias* entertaining one of the progeny, page 182. It is a peep into the happy family-life of the photographer and, perhaps, not intended to be regarded as an eminent example of artistic composition. As an illustration of an exciting sport, "Speed-demons," page 185, is very satisfactory, although PHOTO-ERA has published similar efforts of Mr. Rudolph that possessed conspicuous artistic merit.

The landscape, page 184, is included to illustrate a fault in composition, although, as Mr. Rudolph has explained, the same subject could have yielded a picture free of inartistic objections. Data: Although Mr. Rudolph gives much valuable technical information in his article, he has supplied additional data for three of his pictures. "Good Morning," page 181; April; 11 A.M.; three windows, bright outside; Century 5 x 7; 7-inch Euryplan; F/4.8; ½ second; Standard Orthonon; M. Q. developer; Azo E Hard. "Music Hath Charms," page 182; same month, camera and lens; about 30 grains Victor flashpowder; F/16; Standard Orthonon; Kathol-Hydro in tray;

Azo E Hard. "Speed-Demons," page 185; July; 3 P.M.; fair; Century 5 x 7; 7-inch Euryplan; F/4.8; 1/1000 second; Multispeed Shutter; Seed 30; Metol-Hydro in tray; Azo E Hard Medium.

A perusal of Mr. C. W. Christiansen's highly instructive treatise on pictorial composition will lead to a full understanding of the illustrations on pages 187–192. Data: "A Hillside," page 187; June; 6 P.M.; bright; Graflex 4 x 5; 11-inch Spencer; F/8; 8-time color-screen; 1/25 second; Orthonon; rodinal; carbon. "Fishermen," page 188; same camera and lens; July; 10 A.M.; bright; F/8; 8-time color-screen; 1/50 second; Orthonon; rodinal; carbon. "Outskirts of the Village," page 189; same camera and lens; June; 6.30 P.M.; bright; wide open; 8-time color-screen; 1/10 second; Orthonon; rodinal; carbon. "The Majesty of Pico Heights," page 192; same camera and lens; June; 3 P.M.; bright; F/8; 8-time color-screen; 1/50 second; Orthonon; rodinal; carbon-print.

The late Julian A. Buckley, prominent architectural photographer, used to find diversion from his regular work by making an occasional portrait, at which times he called himself an amateur photographer. One of these efforts which, he told me, he had done quite *con amore*, is a delightful head of a young woman, page 194. It is a striking study of Rembrandt lighting—plastic, forceful, alluring. In its simple, classic beauty, it recalls the heads by the XV century Italian artists. Mr. Buckley might easily have excelled as a portraitist.

The huge, five-hundred-foot Custom-House Tower, of Boston, U. S. A., has stood for its picture to countless camerists, yet resisting the average attempt to make it the subject of a thoroughly pleasing or impressive picture. It would undoubtedly present a striking object if set off against a dark mass of cumulus clouds, or a sun-burst; but with an ordinary sky as a background, the tower, despite its shapely *contours*, will hardly meet the demands of a pictorial masterpiece. Grouped with some picturesque shipping-craft, however, the tall shaft is more likely to produce an effect gratifying to the artistic sense. Herbert B. Turner appreciated this possibility and, with his customary skill and artistic perception achieved a composition that fills the eye with its beauty. Though virtually monopolizing the picture-space, the vessel with its masts and sails forms a convenient and effective foil to the straight and solid mass of masonry, but is secondary in importance and interest. The result is a bold and impressive *ensemble*. Data: March, 1916; 10 A.M.; fair; Smith lens; 1/25 second; pyro; Cyko paper.

Among the numerous delightful photographic impressions W. H. Rabe has preserved from his several camera-visits to the 1914–15 Panama-Pacific Exposition, San Francisco, 1914–15, is a study of an urn—one of a pair that stood at the entrance of one of the palatial structures in the exposition-grounds. The urn itself is of eminently artistic design, and, as the sunlight strikes it, obliquely, and casts a solid shadow on the broad pilaster, a striking effect of light and shade is produced. The picture delights, too, by its happy proportions. Data: No. 1A Kodak 2½ x 4¼; 5-inch rapid rectilinear; F/11; 1/25 second; M. Q. Tubes; P. M. C. Bromide.

Advanced Workers' Competition

Bertran F. Hawley has proved to readers of Photo-Era that he has earned the right to be considered a true artist by reason of his success as a prize-winner in our competitions, and his frank confession as a worker in the photo-pictorial field—"Better Pictures for the Nature-Lover," in our September issue. "On the Watch," page 201, is a worthy example of his high artistic ability—in unity and beauty of design and poetic expression. Data: July, 1918; 1 P.M.; bright, cloudy; Century 5 x 7; 8½-inch Cooke Series III; Ideal color-screen; F/11; 1/5 second; Royal Polychrome; pyro-acetone; enlarged on Azo H, hypo-alum toned; slightly diffused in enlarging with diffusing-attachment of Cooke VI lens.

J. Herbert Saunders, our faithful English contributor, is the author of numerous attractive juvenile subjects that have appeared in these pages periodically during the past few years. In the current issue, he is credited with a composition of a widely different character and one that shows him as master in the art of picture-making. With the possible exception of the carelessly drawn tree, at the right, the picture is eminently satisfactory, the group being particularly well composed. No data.

G. H. Seelig, an energetic and ambitious worker in the B. Y. M. C. U. Camera Club, Boston, is the author of pictures that have won merited praise from critical observers. His landscapes exhibit a profound sense of beauty and a notable appreciation of the rules of composition. He is also conservative in the repression of technical detail. These commendable qualities are apparent in his winter-scene, page 204. Data: November; 9 A.M.; bright; Ica reflex 4 x 5; 7½-inch Struss; 3-time color-screen; 1/15 second; Cramer D. C. Inst. Iso; Rytol, in tank; Enlarging Cyko Plat.; Emergol-Hydro.

The Beginners' Competition

In his landscape, page 207, T. L. Fitch gives evidence of genuine artistic promise. Here the parts are assembled with excellent judgment and the lighting, too, has been managed successfully. With the exception of a few scattered light spots, including the side of the bridge—which impair the unity of the composition—Mr. Fitch's effort is very creditable. Data: June; 7.30 P.M.; diffused light; R. B. T. Graflex 3¼ x 4¼; 6½-inch B. & L. F/4.5; F/16; 2 seconds; Premo film-pack; Nepera solution; enlarged Royal Bromide.

"The Gate of the Forest," page 209, has an element of suggestion, mystery, that gives it a peculiar interest. Hobgoblins, gnomes and other fantastic creatures bob up before the juvenile mind, and threaten to emerge, at any moment, from the dark recesses of the forest so vividly pictured by the camerist. Data: Late August, 11 A.M., good light; Eastman Speed-Film; No. 2 Folding Brownie; 4½-inch Meniscus lens; at F 11; 1/25 second; pyro tank dev.; negative intensified; Enlarged on Eastman Brilliant Velvet Bromide; redeveloped sepia.

Though apparently overcharged with pictorial material and threatening to create a picture of dual interest, "The Old Woolen Mill," page 211, represents a consistent and harmonious *ensemble*. The stream is directly associated with the suggested activity within the mill—it makes the wheels of the industry go 'round. It is a capital portrayal of a novel, fruitful theme. Data: July; 5 P.M.; bright; Graflex, Jr. 2¼ x 3¼; 4½-inch Ic Tessar; color-screen; F/5.6; 1/15 second; Premo film-pack; pyro, in tank; enlargement on P. M. C. buff rough.

If any reader should imagine, for one moment, that the members of the editorial staff, or the office-force, are slackers, in any sense of the word, he is destined to

(Continued on page 219)

ON THE GROUND-GLASS

WILFRED A. FRENCH

Houdin or Houdon?

Readers, who have been looking over some of the back files of Photo-Era Magazine seem to be astonished to find that the famous bust of John Paul Jones, treasured by the Academy of Fine Arts, in Philadelphia, was ascribed to a sculptor by the name of Houdin. Wondering how so noble and beautiful a work of art should be attributed to Houdin, a celebrated magician, these good people at once wrote to the Editor inquiring how he came to make such a serious blunder.

Now, it happens that the present editor and publisher had nothing whatever to do with the writing of that article, which was the product of the chief editor, at that time—T. H. Cummings. This particular bust is referred to, by Mr. Cummings, as a replica, which means that it was sculptured by Houdon, himself. It may be that the bust in Philadelphia is merely a copy of the original bust by Houdon for the Masonic Lodge of the Nine Sisters, in Paris. There is a big difference between a "replica"—made exclusively by the artist, with his own hands—and a copy which is made usually by another sculptor, although it could be made by the artist of the original statue, but this is hardly ever done.

The Editor, therefore, is entirely innocent of the suggestion that he is in any way responsible for these mistakes, as he has always known, from his boyhood-days, the difference between "Houdon" and "Houdin," the latter suggesting the name Houdini, the well-known contortionist and juggler.

Illegible Signatures

"Can you decipher that written signature?" says the employer to his stenographer, handing her a letter with a signature that he had tried hard, but in vain, to read. The employee makes a protracted attempt, but is unsuccessful. The letter with the illegible signature goes the rounds of the office, but with no favorable result. The letter is an important one, and cannot be answered until the sender has sent several letters of inquiry, in the last one of which his signature has been written fairly legibly. Much valuable time is thus needlessly wasted.

To obviate any similar trouble, Rear Admiral Spencer S. Wood, commandant of the First Naval District, has issued an order that, hereafter, when any officer has to sign his name to an official document, he must first typewrite it and then write it underneath in his own hand.

We commend this practice to those who habitually write their names in characteristic but illegible fashion. An excellent substitute might be for the stenographer to typewrite, in conjunction with her own initials, the full name of the writer.

When Women Replace Men

An English magistrate recently dismissed the charge brought by two photographic solicitors for assault against the party they had importuned. The plaintiffs—the fact that they were girls may have hampered their activities—called at the defendant's home and solicited orders for enlarged photographs. They received no encouragement and were told to leave. They impudently persisted, however, when the insinuation was made that they were frauds. Unkind remarks followed and, after threatening to slap their faces, the indignant housewife—who was washing the floor at the time—became exasperated and threw a bucket of dirty water over them. Then followed the suit for damage. Strange; some people make no effort to uphold the dignity of the profession.

A Two-fold Compliment

A son was born to James B. King, the well-known portrait-photographer of New York State. The entire studio-force, headed by Fred Jones, the chief operator, came to pay its respects to Mr. and Mrs. King. Viewing critically the thoroughly well-formed infant, Fred exclaimed in admiration: "Every inch a King!"

The Herald's Price

The late James Gordon Bennett, proprietor of the *New York Herald*, was always quick to resent any insinuation that the publication would pass out of his possession while he lived. Some years ago, a group of financiers concluded that Mr. Bennett was getting too old to continue in active management of the *Herald*, so they decided to buy the paper. Accordingly, they despatched the following cable to the well-known editor in Paris: "How much do you want for the *Herald?*" Two hours later they received this reply:

"Three cents on week days, and five cents on Sundays."

International Amenities

Two British soldiers went into a restaurant in Salonika, and ordered the waiter to bring them "Turkey with Greece."

"Sorry, but I cannot Servia," replied the waiter.

"Then bring the Bosphorus," cried the soldiers.

The boss came, and after hearing the complaint, answered, "I regret to Russia, but you cannot Roumania."

So the soldiers went away Hungary.

An Optical Delusion

Hubby: "Doris, those people will be here in a minute. Put on your evening-dress, quick."

Wife: "Don't be funny, Charles; it is on."

This admirable wittieism emanated from *Cassell's Saturday Journal*, and not from *Cassell's Encyclopedia of Photography.*

It Comes Off

This is a grouchy world. Ah, me!
A fellow seldom laughs.
Why don't we wear the smile that we
Use in our photographs?

—*Cincinnati Enquirer.*

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

The Twentieth Annual Convention of the Photographers' Association of New England

The twentieth annual convention of the Photographers' Association of New England took place in the Auditorium, Springfield, Mass., August 20–23, 1918. Conditions due to the war were responsible for the relatively small attendance, from day to day, though the total of paid admissions was larger than that of the Providence convention last year; but the interest shown in the proceedings was keen and general. The desire for economy was manifested by the curtailment of exhibits, even the Eastman Kodak Company and the Ansco Company, which had extensive picture-displays at Providence, being represented only by heads of departments and technical experts, with desk-room. Notwithstanding, all the manufacturers and dealers represented at the convention, by general agreement, paid for their usual space—thus giving full and generous support to the convention and helping to make it the financial success that it was. There were, of course, the usual picture-exhibits by members of the Association, and many complimentary ones by photographers outside of New England. Nevertheless, there was a degree of compensation in the fact that the exhibition-hall was one of the largest and finest in the country, boasting a magnificent organ, played daily for the delectation of the audience by a distinguished musician. The pinch of hard times was skilfully camouflaged by the generosity of the local Chamber of Commerce and the resident professional photographer, so that adequate entertainment was not lacking. Dominating the routine business and other proceedings was the unostentatious, but forceful personality of chief executive of the Association, President L. B. Painting, who displayed a leadership of the highest quality. Everything moved like clock-work; and in introducing the various speakers he manifested an intimate and accurate familiarity of their subjects and their capacity, so that it seemed that he was fully capable of taking their place on the platform or behind the camera. The qualities that we enumerated in our sketch of him, a year ago, after he had been elected to the office of president of the New England Association, were exemplified at the Springfield convention in a convincing way, viz., superiority of intellect, sincerity of purpose and eminent executive ability. In recognition of the highly successful manner in which he conducted the business of the Association and the convention, in particular, Mr. Painting was nominated and reëlected to the office of president—the first man to be thus honored in the history of the Association.

The work accomplished at the convention was notable for its eminently practical character, the principal speakers being Eugene R. Hutchinson, of Chicago, Ryland W. Phillips, of Philadelphia, and J. P. Haley, of Bridgeport, Conn. Despite the small attendance, New England was well represented, members from all the five states being present. But Springfield is situated so centrally and is so conveniently accessible, besides other advantages, that the city will entertain the next convention, in 1919. There is every prospect of a large attendance.

The Convention was called to order Tuesday morning, August 20, by President Painting. After the singing of the Star-Spangled Banner by the Convention, the president appointed the Committee on Nominations and the Committee on Resolutions, and the session was adjourned.

The Second Session was held in the Mahogany Room of the Auditorium at 3 o'clock. Mr. Eugene R. Hutchinson gave a talk on home-portraiture, but dealt mostly with his own, personal way of doing things, his ideas with regard to sitters, how he influenced them and they him—in short, an agreeable dissertation on his personal ideals.

He was followed by Ryland W. Phillips with a practical, stimulating talk on his own business and studio methods, conducted along economic lines and, therefore, timely and helpful. This he supplemented by an illustrated talk on defects in prints and their remedies.

The evening session was held at 8 o'clock and was devoted to a lecture on the working in of backgrounds, by H. A. Collings and A. B. Cornish of the Eastman Kodak Company, followed by an address, on making enlargements, by J. P. Haley, enlivened by anecdotes of Anthony Van Dyck and bits of practical advice.

The morning-session of August 21 was opened by an address by Mr. Schuerle of the War-Savings Stamps Committee. The audience was then entertained by an organ recital given by Mr. A. H. Turner, of Springfield, which proved to be a rare musical treat. The address of welcome was delivered by Mr. W. H. Shuart of the Chamber of Commerce, seconded with appropriate remarks by L. G. Gerry of Willimantic, Conn.

The afternoon session was held in Mahogany Hall. Mr. Eugene R. Hutchinson gave a practical demonstration of home-portraiture, his sitter being Captain H. A. Wilsdon of the Royal Flying Corps of Great Britain. Most of the time was consumed in a recital of personal experiences with sitters and references to his ideals, that formed a very pleasant chat.

Mr. Charles J. Columbus, secretary of the National Association, followed and made a brief, but earnest speech explaining the benefits accruing to members of the P. A. of A. during the war. Members, who have paid their dues, will receive prompt, practical help from the National Association when by reason of their absence in the country's service the success of their photographic business should be imperiled. This generous offer of aid and coöperation made a deep impression.

Mr. Columbus was followed by Mr. J. A. Dawes, of the Wollensak Optical Company, who made a fervent, patriotic speech, pleading for loyal self-sacrifice in behalf of the American soldiers fighting in France, and picturing the kind of assistance to be rendered by members of the P. A. of A. to one another in war-time. The climax of this brief campaign in favor of increased membership in the P. A. of A. was reached when Mr. J. C. Abel, of Cleveland, took a position on a small table better to see and to be heard, and addressed those present on the subject so ably presented by Mr. Columbus and Mr. Dawes. The result was that about a dozen new members were gained for the National Association. Mr. Abel saw to it that they signed and paid.

The evening session was held in the Auditorium and the large audience in attendance was treated to an illustrated talk on aërial photography by Captain H. A. Wilsdon of R. F. C. of Great Britain. He spoke from personal experience, having been severely wounded in the service in France.

The morning-session of August 22 was opened by a series of brief talks, one minute in duration each, by the manufacturers, explaining why they were there and where they were from.

At the conclusion of these impromptu excuses, President Painting was presented with a handsome gavel and a beautiful specimen of "Old Glory" as tokens of the friendship of the Association.

At the conclusion of this pleasant ceremony Mr. Harry M. Fell and Mr. A. B. Cornish, both of the staff of the Eastman Kodak Company, talked on stunts, dodges and tricks used in the studio, darkroom, printing-room and elsewhere about the premises. Here were real nuggets that were eagerly seized by those present and stowed away for future use.

Then appeared Mr. J. A. Dawes, who delivered a sensible, clear and comprehensive lecture on modern camera-lenses—one of the best ever heard at a photographers' convention. It deserved fully the enthusiastic applause that greeted the lecturer when he had finished. Mr. Dawes was followed by Mr. J. P. Haley, the veteran photographer of Bridgeport, who explained in a few words the advantage of photographing the reflection in a mirror of an unattractive sitter.

The morning-session of August 23 was opened at 10.35. The principal event was the reading of the Treasurer's report, by treasurer E. A. Holton. The items of expense were necessary and reasonable—no useless, extravagant disbursements that have so frequently disgraced the financial management of a certain larger organization and virtually proved its undoing. Here, in a small organization, a cash balance of $653.37 is left in the treasury!

After a number of resolutions of appreciation and gratitude had been passed, Mr. J. A. Dawes, secretary of the recently formed National Photographic Exhibitors' Convention Bureau, explained that the absence of the customary exhibits of manufacturers and dealers, at the Springfield convention, was due to recognized difficulties of transporting the goods by freight, the use of express for the purpose being out of the question. Besides, it would be unjust to try to ship heavy merchandise during the period of the war, when every bit of rolling-stock should be used for the essential purpose of winning this war. The loss in not having the customary displays was mutual, and yet the manufacturers and dealers have gladly paid into the Association treasury the same amount of money for space, though not used, as they have in previous years. Moreover, they have contributed generously to the entertainment-fund. This course they will continue until the war is over and then will come a revival of the good old times—large and comprehensive displays of apparatus and pictures.

The question of a new association-button was settled by the adoption of the present button as a permanent emblem, with a difference in color to distinguish those for active members from those for associate-members.

The election of officers for the ensuing year was as follows:

President—L. B. Painting, Concord, N.H.
First vice-pres't—A. K. Peterson, Hartford, Conn.
Second vice-pres't—W. H. Manahan, Salisbury, N.H.
Treasurer—E. A. Holton, Boston, Mass.
Secretary—Earl G. Mills, Providence, R. I.

State Vice-Presidents

Maine—Paul Jordan, Portland.
New Hampshire—Ira F. Lindsay, Manchester.
Vermont—C. E. Shorey, Brattleboro.
Massachusetts—J. R. Neville, Brockton.
Rhode Island—Lewis Oliver.
Connecticut—W. F. Donnelly, New Haven.

Springfield was chosen unanimously as the place for the next convention—1919.

The Wollensak Trophy Cup was awarded to the Donnelly Studio, of New Haven, Conn. Other competitors were Hallie Wilson, Will Rounds, Garber Studio, Gardner Artist Studio, Frank Moore and Geo. E. Tingley.

The manufacturers and dealers represented were:

The Ansco Company—W. B. Mussen, general sales mgr., Frank N. Leache, Paul True and Frank Hearn.
Bridges Mfg. Co.—Grant Wilson.
Central Dry-Plate Company—Chas. N. Smith.
A. M. Collins Mfg. Co.—J. K. Harriman and Joseph Kinn.
Cramer Dry-Plate Co.—G. A. Cramer, president, and R. P. Brackett.
Eastman Kodak Company—C. F. Ames, A. H. Paul, Harry M. Fell, A. B. Cornish, Walter Pieree, A. C. Fisher, Chas. H. Leake, Chas. Nelson, H. T. Rydell, J. C. Whitney, W. F. Spurling, R. J. Nesmith, H. F. Arnold and H. A. Collings.
Haloid Company—F. W. Godfrey.
Hammer Dry-Plate Co.—Chas. Shafer.
George Murphy, Inc.—G. W. Harse.
Presto Mfg. Co.—S. S. Loeb.
Sprague-Hathaway Studios—Charles E. Wallis and T. B. Elwell.
Robey-French Company—Thomas Roberts, Jr., general manager, F. Q. Avery, George A. McLaughlin, Wm. G. Homeyer and Carl J. Marion.
C. Rogers & Co.—W. F. Harwood, H. W. Mansfield and R. H. Nott.
Tapprell, Loomis & Co.—J. C. Schulz and W. E. Sholl.
Wollensak Optical Co.—J. A. Dawes.

Besides the numerous individual print-exhibits, on the stage, there were several framed exhibits by Eugene R. Hutchinson, on the floor in the Auditorium, and a specially interesting one by Horace A. Latimer, the eminent amateur photo-pictorialist. The latter's collection consisted of nineteen multiple gum-prints, 11 x 14 and 14 x 17, landscapes, portraits and genres, and remarkable for beauty in composition and tonal quality. One of the most admired subjects, "Ploughing in Burgundy," will appear in the November issue of Photo-Era.

Although, according to Secretary Whitney's report, 387 paid members (active and associate) attended the convention, only about one-half were in evidence at the sessions, many being present only one day; but the clambake, marked, as it was, by good fellowship and open sociability, yielded a gathering of 300.

The Collins Mfg. Company gave out a card bearing the following moral-teaching incident: Two hoboes

met recently on a blind siding. One was a photographer who could do work more cheaply than any of his competitors. The other one didn't have any money either.

Before the recruiting for new members in the P. A. of A. was begun, it was found that 25 of those present already belonged to the National Association—dues paid and in good standing.

The Photographic Press of America was represented by J. C. Abel, of *Abel's Weekly* and the *Amateur Photographer's Weekly;* Frank V. Chambers, of the *Bulletin of Photography* and *The Camera*, and Wilfred A. French, of PHOTO-ERA THE AMERICAN JOURNAL OF PHOTOGRAPHY.

The clambake, provided as the principal *al fresco* entertainment, at Riverside Park, was attended by a jolly crowd of 300 and proved to be an all-around success. No one experienced any ill effects.

The baseball game, following the clambake and played by the manufacturers and dealers, was an amusing affair. The best team won.

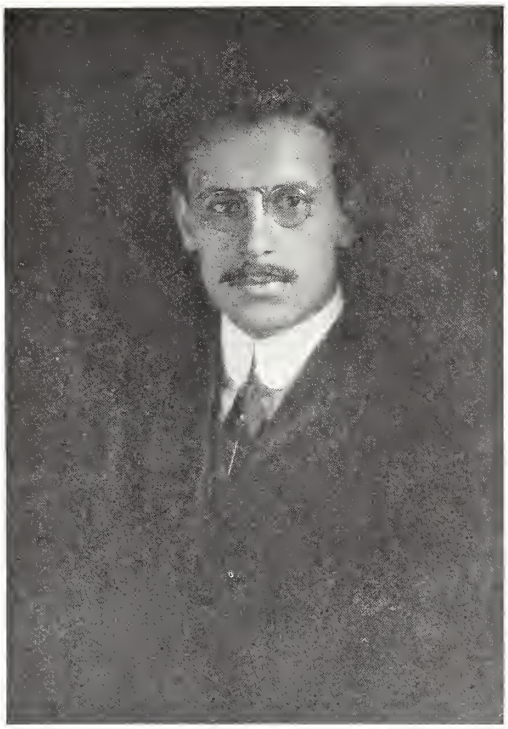
One of the speakers stated that 5,000 professional photographers were in the service of Uncle Sam, doing effective work in the various photographic departments at the front as well as at home.

The donation for the Tobacco-Fund, engineered by Frank V. Chambers, amounted to $100.70, and was generously turned over to the *Springfield Union* for its own tobacco-fund.

Photo-Thrift Column

AMATEUR and professional photographers are just as eager to help win the war as those engaged in other activities. The saving of time and material is vital. PHOTO-ERA leads—more often than it follows—a worthy cause. In the present instance, we believe that PHOTO-ERA is establishing another precedent. Surely, our readers must know many methods whereby a saving of time and material may be made. Now is the moment to give photographers the benefit of personal experience with regard to the saving and the economical use of plates, films, developers and accessories. If one ounce can be made to do the work of an ounce and a half—*that one half ounce is worth saving!* If the use of a 4 x 5 kit in a 5 x 7 camera may be used to advantage to save plates and developer, we will welcome such information in this column. Moreover, to show that we appreciate the efforts of PHOTO-ERA readers, we will give a six-month subscription to every contributor whose letter we consider of practical photo saving value. We hope that readers of PHOTO-ERA will realize that this new venture depends upon them for success. It is a patriotic effort to help amateur and professional photographers save in every way possible. It has a direct bearing on winning the war and deserves hearty support at once. Make every contribution as brief as possible—not over one hundred and fifty words. Paper and ink must be saved; and we ask contributors to bear this in mind. Now, let every reader get down to business and send his contribution not later than the twentieth of the current month.

For example, we might give the case of some camerists who expose from two to five plates or films on every subject in order to obtain "one good one." If the professional knows his business, one exposure for every pose should be enough. With regard to the amateur, he should bend every energy to master the technique of exposure to the end that he, too, need make but one exposure for every subject. An exposure-meter is of great value. In printing, waste may be eliminated by correct exposure and the selection of the right paper. In short, aim to make every click of the shutter result in a satisfactory picture.



L. B. PAINTING, PRESIDENT-ELECT OF P. A. OF N. E.

Our Illustrations

(Continued from page 215)

change his opinion. Indeed, the assistant-editor is doing double duty, for, in Wilbur F. Turner's admirable snapshot, page 220, he is pictured as performing his patriotic duty, cheerfully and well, as a member of the Massachusetts State Guard. The scene portrayed by Mr. Turner is at Camp Augustus P. Gardner, Framingham, Mass. Data: July; noon; bright; No. 3 Kodak $3\frac{1}{4}$ x $4\frac{1}{4}$; Goerz Dagor; F/16; 1/50 second; Eastman N. C. film; enlarged on Wellington Bromide.

The subject offered this month to our contributing critics, page 212, is "The Spirit of Spring" by E. M. Pratt. To assist in a better understanding of the composition, the following data are supplied: May, 1918, 10 A. M.; 4 x 5 Sanderson; Wollensak Velostigmat; F/8; 1/25 second; Wellington Anti-Screen Plate; 8 x 10 Montauk Bromide.

Our September Number

It was very gratifying to the Publisher to receive from art and book publishers, government-officials and subscribers, generally, letters expressing their admiration for the appearance of the September number of Photo-Era. Liberal praise was bestowed upon the illustrations, especially Mr. F. J. Mortimer's superb marine, entitled, "We are ready now!" and picturing the approach of the American fleet, with the Stars and Stripes overhead—a scene well calculated to stir the blood of every patriotic American.

Many subscribers have obtained extra copies of the September issue in order to frame either the front cover —printed in green ink—or the inside illustration, and keep intact their original copy. Anyone desiring a copy for himself or an interested friend, should order it at once. Copies of this unusual number of Photo-Era will be mailed promptly on receipt of 20 cents in stamps and we suggest that our friends act at once as our supply of extra copies is limited.

Amateur Beats Professional

Another conspicuous instance where an amateur camerist beat the professional, merely beeause he was on the spot, is Ernest H. Washburn, of the B. Y. M.C.U. Camera Club, of Boston, Mass. His series of photographs, postcard size, of the war-garden on Boston Common, so pleased the authorities that they ordered several hundred sets and rejected similar sets by professional photographers. A series of similar photographs of a Red Cross parade, on Tremont Street, near the Common, by Mr. Washburn, was honored in the same way, because of their pronounced artistie qualities and clear definition. Certainly, no professional could ever hope to excel them.



PHOTO-ERA SAWING WOOD — WILBUR F. TURNER

William Ludlum is to be Congratulated

Readers of Photo-Era will remember with pleasure the remarkably beautiful patriotic poem, "The Fabric", by William Ludlum, which appeared in July, 1918, Photo-Era. Mr. Ludlum informs us that this poem is to be used by the Liberty Loan Committee of New England in connection with its publicity campaign for the Fourth Liberty Loan. Furthermore, he states that Photo-Era is to receive full credit whenever the poem is used. We congratulate Mr. Ludlum and are glad that Photo-Era was the means to bring his stirring poem to public attention.

Hearing that Secretary Daniels expressed the desire to own a print of F. J. Mortimer's now famous photograph, "We are ready now!"—reproduced in September Photo-Era—the Editor promptly sent his own framed original print with his compliments to Washington. It now adorns the Secretary's office.

The Right Spirit

Dear Mr. French,

I thank you for your award of the ..... prize. I will take (list of goods) as an equivalent of this prize.

My wife saw your letter and asked what the *first* prize was, I told her that it was a loving-cup. She has already found a place where to put it and insists that I enter every competition until I land it. So watch out for a deluge of pictures from me.

A prize-winner.

LONDON LETTER

CARINE AND WILL CADBY

There is at the Princes' Galleries, Piccadilly, an exhibition of Naval Photographs in Color, arranged by the Ministry of Education. In opening the exhibition Sir Eric Geddes (First Lord of the Admiralty) held in his hand a photograph that conclusively proved that when it was made, probably not a month before, the Zeebrugge canal was effectually blocked. The most curious part of his news was that this photograph was made by a German. He did not propose to divulge how it came into his possession. It was presented to Lord Beaverbrook who undertook that it should be enlarged and included in the exhibition. So the enemy is, probably, quite unwillingly responsible for a very interesting addition to this show.

This war-exhibition is in many ways quite unlike all its predecessors. All the pictures are in color. This is the work of Messrs. Raines of Ealing, who have composed an harmonious scheme from diverse subjects, by treating them all in the same style of color. Even the German photograph, referred to, is indistinguishable from prints made by our own flying-men, being colored in exactly the same way. Whatever the coloring-process is, from the point of view of this show, it is an unqualified success. We are not uttering platitudinous praise in saying this, but a carefully-arrived-at opinion. The aim of such an exhibition is not to show the most artistic work of a group of photographers, or the latest cleverness of some novel process as such, but rather to give the great stay-at-home public an idea of what the Navy is doing, and how it is being done. And these enlarged—very much enlarged—colored photographs, looked at with a not too critical eye, appear really to give daylight-glimpses in natural colors of all sorts of naval activities. Realism is the great strong point of most of the pictures, and the result is much as if the photographs had been taken on gigantic Lumière color-plates. The photographic quality is apparent everywhere, and not in the least obscured; but rather intensified by the coloring-process. As they are mostly sea-scenes the key is high; and, as one enters the first gallery, the impression gained is that a flood of light is radiated from the pictures, so vivid are the bright seas and skies. Another point of consuming interest is the position from which many of the pictures are made. It would seem that these naval photographers had gone about their work with one-hundred-foot tripods. Probably, they were taken from low-flying airplanes or airships, and the results are novel and often extremely pictorial. Seemingly, a new point of view had been discovered—not to be confused with the map-like results of ordinary air-work. Personally, we have always contended that a high view-point for the camera affords eminently valuable advantages; for if not carried so far as to appear unnatural, it opens up the distance and emphasizes points that from the level ground would be hidden, thus often materially adding to the interest of a picture. We are also aware that this view-point is condemned by many as inartistic. However, these are the days to break away from old shibboleths and crusted precedents, and the Navy has certainly given us a good lead in this direction. As a particularly happy instance, we would cite "One of the Navy's Lairs," an excellent view of a quiet little bay packed full of destroyers. From the level sea, nothing could have been seen but the first ship or two; whereas from the elevated position from which this photograph must have been made, we get a splendid view of the whole swarm, lying cosily at anchor side by side. There are realistic photographs of ships actually sinking, with cargoes floating on the water; we see the oil on the sea where a submarine has been destroyed; we are given graphic views of convoys zigzaging across the ocean with their fighting escorts; smoke-screens, depth-charges, life in a submarine—all such subjects figure on the walls, and there is an enormous photograph of the "Vindictive" after she returned from the Zeebrugge, showing her shattered and shell-torn side.

This exhibition is such an unqualified success that people wait in long lines to obtain admission, and it is to be hoped that later the Navy will give us a further glimpse of its doings in which would no doubt figure some of the many U. S. sailors and ships that are now in our home-waters.

Aërial photography is responsible for the cheering news that Zeebrugge canal is still blocked and quite unusable. We learn this not only from the German photograph exhibited at the Prince's Gallery, but from negatives recently made by our own airmen. In any other war we should have had to judge of this only by the lessened submarine activity; but now flying cameras can make studies of their "sitters" even under water, and work well within the enemy-lines. Photography in the air is rapidly being divided into two branches, viz.: airplane-work, and that which is carried on from airships. The methods of the former are already familiar to the public; but so far we have heard little of the camera man's doings on the airship. These floating gas-bags have far better chances to get deliberately good photographs, as they are continually at very low altitudes and can hover over their prey. They are much used for spotting submarines and carry a fixed, fairly large camera, adapted and arranged to the best advantage for their particular purpose. But this fixed camera is useless to illustrate the doings of the airship-crew when aboard their weird craft, and Ward Muir, who has lately left the army and is now engaged on propaganda-work, has been allowed to take a trip in one of these coastal airships and, what is more, to take his own camera with him, and the results have been reproduced in a recent number of *Country-Life*. His pictures and accompanying article give almost the first intimations of these useful airships that have been allowed to appear in the press, and they reveal an extensive and efficient offensive organization that the public had hardly dreamed of.

For four years now, we have been educated up to the iniquity of waste. "Winning the War in the Kitchen" is a well-known adage to encourage housewives. But there is a comic side to the economy-crusade. When we go to buy the community jam that is being made in the fruit-growing villages, we have to provide empty pots. For instance, if we want six two-pound pots of strawberry-jam, we must give in exchange pots that will hold twelve pounds, and not a penny is deducted from the very high government-arranged price that the jam brings. A much more

attractive scheme is that of photographic plates. We hear that, owing to the shortage of glass, our future orders for plates can be executed only if we return "a quantity of old negative glass equal to 75 percent. of the area ordered." It is a sound idea, really, and there are few of us who are not glad to get rid of some failures which take up valuable room on the shelves. But when photographers realize that these space-wasters have actually a money-value (seven shillings a gross for half-plate size) they will the more readily send them along to the maker to be turned into fresh material on which to try again. Also, this is the time to dispose of old apparatus, for everything photographic has shot up in price. There are some high-grade small English cameras that are at the moment virtually unobtainable new, and second-hand examples of particular patterns, if in good order, are bringing more than they cost when new.

An English View of Photo-Profiteering

"Nice old game these photographic manufacturers and dealers are playing on us. I don't think. Must take us for a lot of milk and water idiots. Regular profiteerers I call them. Ought to be shot at dawn, or the night before. That's what I'd do with the whole mob of them. Look at the price of plates. What they want to do is to make a dozen plates and get just the same price as they used to have the cheek to ask for a gross."

"But surely plates do not cost twelve times what they used to cost?"

"Who said they did? You wait. They'll cost all that, and more, before they're done. They are only just beginning. And they talk about increased cost of production. Increased fiddlesticks. Have you ever worked out how much silver there is in a quarter-plate? It isn't a ton, is it? Nor yet a pound. And they talk about the shortage of glass. Rot! Just the same as rabbits in cold storage. I know someone who's seen them. Millions of them. Stacked right up to the roof and covered with icicles."

"But you can hardly expect the plate-makers to use frozen rabbits instead of glass."

"That's it! Be funny about it. Jolly fine joke paying pounds and pounds for a few mouldy little plates. What I am saying is that the makers have got plenty of glass. They know their way about. I reckon that after every air-raid they send hundreds of motor lorries around and pick up thousands of tons of broken glass, and then just melt it down again and hide it, so as to pretend they haven't got any. Look at all the unused greenhouses. Plenty of them are glazed with old negative glasses already cut to size. Just take them out and run a bit of cheap emulsion over them, and there you are. They don't want to make plates. What they are after is to keep on putting up the price till there isn't a single photographer left, so that they can take things easy."

"Why should they be so eager to kill the goose that lays the golden eggs?"

* * * * *

"Mere details. Matter of system. What you want is to smash the manufacturers and put all their huge profits in your own pockets and War-Loan. What's the matter with you is that you can't think. You don't take a broad and sensible view of things. You think because you are being robbed, and profiteered, and exploited, you must always keep on having it done to you. Not me. I like to think out how it can all be stopped, and put on a fair, business-like footing. If everyone made his own beer, the breweries would jolly soon shut up, and we ought to start making our own plates. In twenty-four hours all the plate-makers would be falling over each other and treading on each other's heads to sell us twelve-tens at eight a penny. That's a lot less than they cost, if the truth were only known.

"By the way, you use photography only as a hobby, don't you? So, after all, even if you have to do less, or give it up altogether, it is only doing what we have to do in regard to a good many other things at present."

"Stuff and nonsense. Why should I give up a hobby, or slack down on it, or pay more for it? I'm a boot-manufacturer in business, and I reckon I've got a right to have a hobby and get the stuff cheap for it, too."

"Have you put up the price of your boots?"

"You have got about as much sense as a cheap turnip. Of course, I have put up the price. How do you expect I could keep going, if I didn't! Look at the price of leather, when you can get it, and the price of paper, and the price of every blessed thing you put into a boot. Look at the wages. Look at the running expenses of a factory, and the increased taxation, and the cost of food. Do you know what a sovereign's worth to me nowadays? About two-and-nine (29, instead 20, shillings). It takes me all my time to get boots made at all, now; and when I do get them made, I've got to charge a good old thumping price for them, or shut up altogether. But I'm not talking about boots, as you might know if you listened. What I'm talking about is plates. Plates for photography. A few bits of cheap old glass with a dash of gelatine smeared over one side. They ought to be as cheap as dirt, and not sold by the carat, like diamonds. Robbery, I call it!"

The Walrus, in *Photography*.

Is Your Life a Hard One?

Do you people at home feel at times that this war has made your life pretty hard? Read what an American correspondent writes about one of our boys who had been doing his duty:

"In a little field hospital west of Montdidier I stopped at the bedside of an American boy, one of those victims of the German mustard gas, with which the Huns are making all their present gains. His eyes were matted with yellow pus and he could not see. His face was terribly burned. His lips were swollen and purple. His whole body had been turned the color of an Indian, and portions of it looked like melted flesh, as though it had been liquefied.

"The fighting had been renewed all along the American lines, and German wounded had begun coming into our hospitals. I said to this soldier:

"'The boys are getting their revenge for you fellows to-night.' He smiled through his seared lips, and in a voice so faint that I had to bend down to listen, he gasped, 'God! I wish I was back there with 'em!'"

Do you still think your life a hard one?

Help support that boy and the hundreds of thousands of others doing their duty. Buy War Savings Stamps to the limit of your capacity.

The Young Lady across the Way might say, but hasn't, that her father never opens his photo-supply store on Sunday because he doesn't believe in sabotage. *The Spatula.*

RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER

The following patents are reported expressly for the Photo-Era magazine from the patent-law offices of Norman T. Whitaker, Whitaker Bldg., Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps.

A Lamp-House for Projection-Cameras has been invented and patented by Hugh Davis, Rochester, N.Y., No. 1,270,269, assignor to Eastman Kodak Company, a Corporation of New York.

William F. Folmer of Rochester, N.Y., has been issued a patent on a Photographic Camera No. 1,270,280. Patentee has assigned his title to the Eastman Kodak Company.

A Camera-Back has been patented by William F. Folmer of Rochester, N.Y., assignor to the Eastman Kodak Company. The patent-number is 1,270,281.

Patent, No. 1,270,302 on Developing-Apparatus for Photographic Films has been granted to Robert Kroedel of Rochester, N.Y., assignor to the Eastman Kodak Company.

A Shutter-Actuating Device has been invented and patented by Paul J. Marks of Rochester, N.Y., assignor to Eastman Kodak Company. Patent-number is 1,270,537.

William M. Green of Evanston, Ill., has just been granted patent No. 1,270,612 on a Camera.

Frederic Eugene Ives of Philadelphia, Pa., has been granted a patent No. 1,268,847 on Color-Photography.

Austin Carl Fisher, of Rochester, N.Y., has invented a Folding Camera which is disclosed in his patent, No. 1,268,950. Patentee has assigned his interests to Eastman Kodak Company.

A Photographic Film-Spool has been patented by Garshom A. Riggs of Rochester, N.Y., assignor to Eastman Kodak Company. The patent-number is 1,269,003.

Patent, No. 1,269,021, on a Camera, has been issued to Stephen Tactkian.

Thomas Baker of Melbourne, Victoria, Australia, has been granted Patent, No. 1,269,365 on a Photographie Roll-Film Cartridge. Patentee has assigned his rights to Eastman Kodak Company.

An Autographic Camera has been invented and patented by Axel Dalgaard Hansen of Camillus, N.Y. The patent-number is 1,269,432.

Patent, No. 1,269,457 on a Photographic Film-Holder, has been issued to Hiram S. Killgore of Eldon, Mo.

James R. Powell of Glasgow, Ky., has invented a new and useful improvement on Photographic Printing-Device which is disclosed in his patent, No. 1,268,609. He has assigned one-half of his interests to Christopher T. Grinstead, of Glasgow, Ky.

An Automatie Film-Winding Camera has been invented by George W. Topliff, Carl Bornmann and Ezra C. Clark of Binghamton, N.Y., assignors to Ansco Company, Binghamton, N.Y., a corporation of New York. The patent is No. 1,268,805.

James E. Ender, Lionel W. Cromption and Willard C. Burgert of Tampa, Fla., have been granted patent, number 1,271,685, on a Camera.

A Photo-Chemical Apparatus has been patented by Walter A. Snelling, Pittsburgh, Pa. Patent number 1,271,790.

An Autographic Device for Cameras has been invented and patented by Charles C. Finn, Seattle, Wash. Patent number 1,272,029.

George C. Beidler of Rochester, N. Y., has invented and patented a Photographing Apparatus. Patent number 1,272,190.

Patent, number 1,272,227, on a Camera, has been issued to William John Crothers, Toronto, Ontario, Canada.

Patent, number 1,272,292, on a Camera, has been issued to Walter K. Menns of Chelsea, Mass.

An Autographic Camera patent, number 1,270,983, has been issued to Alexander S. Spiegel of Chicago.

Osear Duperly, Medellin, Colombia, has been granted patent, number 1,272,022, on a Photographie Camera.

Patent, number 1,271,156, on a Photographie Camera, has been issued to Margaret Gioler and Robert Chenault Gioler, Seattle, Wash.

A Film-Shifting Mechanism for Cameras has been invented and patented by Orville Weis, of Thayer, Kan. Patent number 1,274,223.

Patent, number 1,274,262, on Photographic Shutter, has been granted to Otto H. Gruss, Jamaica, N. Y., assigned to Simplex Photo-Products Company, Morris Park, N. Y., a corporation of New York.

James W. Ramsay, of Brooklyn, N. Y., has been granted patent, number 1,273,183, on a Camera.

Patent, number 1,273,373, on a Photo-Camera, has been granted to Echi R. Iwagami, of Chicago.

Method of and Article for Making Photographs has been invented and patented by John G. Cafstaff, of Rochester, New York, assigned to Eastman Kodak Company, Rochester.

John G. Jones, Rochester, N. Y., has invented and patented a Photographic Film-Cartridge. Patent number 1,272,454. Patentee has assigned his title to the Eastman Kodak Company.

A Support for Cameras, Machine-Guns and the like. Patent, number 1,272,574, has been granted to William M. Thomas, New York City, assigned to Thomas Oberkirch Company, Limited, New York City, a corporation of New York.

Patent, number 1,272,798, on Camera, has been granted to William M. Green, Evanston, Ill.

Besides these patents there have been many this month and previous months which have been withheld from issue by the United States Patent Office in order that they will not become known to the enemies of the United States. There are many inventions pertaining to photography which are of vital importance to the War-Department. Photography has played a big part in the war up to the present time and promises to be of still greater importance.

Speed in Forming a Judgment

She: "How can you mistake a chow for a collie? Why, I can tell a chow the minute I see one."

He (a camera-expert): "I beat you—I can tell one in a second."

WITH THE TRADE

German Lenses

An examination of our advertising-pages of the period preceding the beginning of the present world-war, will show that the English-made lenses were conspicuous by their absence. The reason is difficult to find, unless that the English lens-makers relied too confidently upon their past reputation. The matter is referred to, editorially, in a recent issue of *Amateur Photographer and Photography*. "A correspondent, referring to a recent paragraph in these columns on the subject of German lenses, writes: 'After all, there was some excuse for Sir Eric Geddes's belief that photographic lenses were a German product, for there is no getting away from the fact that in pre-war times the German makers, taken as a whole, *advertised their goods far more extensively than the British makers.* With one or two exceptions, the latter seemed content to rest on the laurels they acquired before the Hun-makers came along.' There is no doubt that the finest advertisement of all is an appreciative user; and British makers have always enjoyed this to the full, as the beautiful quality of their instruments deserved. At the same time, there is no doubt that some of them allowed their German competitors to beat them *in the matter of publicity.* The British makers of magnetos for motor-car use have organized themselves and are carrying on a joint campaign of advertising on a big scale; so that, when once the war is over and they are again in a position to supply, they will have a strong position, owing to maintained and increased goodwill. Every photographer in the country, amateur or professional, should have had impressed upon him the fact that there is a great British lens-making industry, able and ready to provide him with the best of tools for his work. It might even be carried so far that Cabinet Ministers in the future might have at least a suspicion of its existence. Every month's delay in initiating it, increases the leeway that will have to be made up when trade once more becomes a thing to be sought for."

A Folding Drying-Net

A compact, collapsible drying-net has been placed on the English market. The employment of a net is the most satisfactory way to dry prints and enlargements, and this method is coming rapidly into more general use. The drying-net consists of four strong canes joining at the ends, and machined muslin to stretch over the frame, the size of which, when assembled, is about 46 x 38 inches. Special advantages are that the frame is dismantled in a few seconds, and, when folded up, takes up no more room than an umbrella. The convenience of storing and keeping the drying-net clean is obvious.

English workers, always eager and able to prepare home-made devices, adopted the idea of a drying-frame some time ago. Some utilize two old, large picture-frames, one larger than the other, across which a piece of fine muslin is stretched tightly. The larger one is then laid flat on a large table, with several full-sized sheets of blotting-paper between, and in close contact. The wet prints, from which the water has been drained, are then placed face down on the frame, followed by the smaller one, on top of which several sheets of blotting-paper are laid. A wide print-roller is then passed several times to and fro over the protected prints which will then be found to be surface-dry, and soon will be entirely dry. The method is an old one, in this country, and is certainly efficacious.

Hypo Expensive in England

In an editorial reference to the present high prices of photographic supplies, we should have mentioned how fortunate American consumers are compared to the English. As an instance, hyposulphite of soda retails in this country at eight cents a pound—only three cents more than several years ago—and, by the keg (100 lbs.), at five cents a pound. Last July, hypo was quoted at 84 shillings per cwt. (112 lbs.), in England—at the rate of eighteen cents a pound; but by the pound, at retail, *twenty-five cents or more.* Other supplies—chemicals, porcelain trays, darkroom-lamps, etc.—are also higher, there, than in the United States.

The Most Expensive Camera-lens in America

A thief entered a well-known and successful commercial photo-studio, not far from Boston, U. S. A., several months ago, and stole a valuable camera-lens. The proprietor, appreciating the advertising-value of the occurrence, saw to it that the facts were reported in the daily press, and that the extent of the loss was not *underestimated!* In fact, he declared on the witness-stand that the stolen lens (of American make) was worth about $2,000, when in reality and at present war-prices its value is about $600! He ought to be in the class of war-profiteers who figure their gains at several hundred per cent!

Tribute to Photo-Magazines

The salesman-in-chief of a very large store declares that his firm subscribed direct to all the principal papers dealing with the trades in which they were interested. After remaining in the various departments for two or three days the papers may be taken home by members of the staff. Careful observation revealed the fact that the most assiduous reader of the trade-papers made the most efficient assistant in the various shops.

Substitutes for Dryplates

The photographers in England are much disturbed over the growing scarcity of glass, and are agitating the adoption of suitable substitutes. Some suggest the return to paper stripping-film which was used so successfully with the first kodak, thirty years ago. Others advocate photo-coated paper, which ought to be feasible, for such an article is used extensively in X-ray work. Plates coated first with gelatine and then with emulsion—so that after the exposed plate has been developed, fixed and washed, the entire film can be stripped from the glass, and the latter recoated—ought to solve the problem.

PHOTO-ERA

The American Journal of Photography

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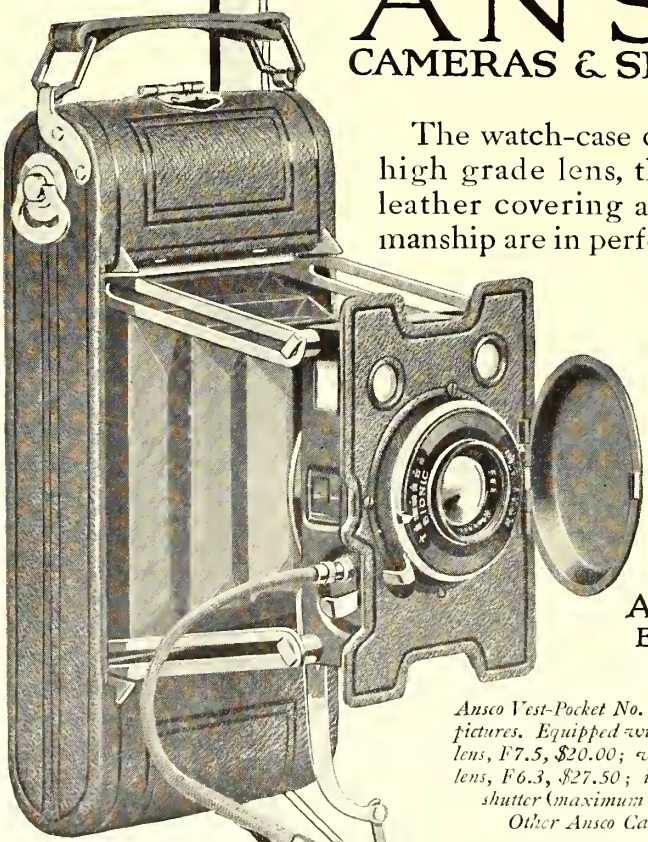


NOVEMBER 1918 20 CENTS

The Right Camera for These Stirring Times

Picture opportunities are plentiful. Be ready for them with the Ansco V-P No. 2. It rests so lightly in your pocket, and gets into action so quickly, that you will want to carry it with you always. Its fast anastigmat lens, in exclusive combination with a simple micrometer focusing device, assures pictures sharp and clear in every detail.

ANSCO
CAMERAS & SPEEDEX FILM



The watch-case cover protecting the high grade lens, the genuine fine grain leather covering and the superb workmanship are in perfect harmony with the pictures it takes, and unite in making the Ansco V-P No. 2 a camera which you will be proud to own.

Write for specimen picture on Cyko Paper. Then ask the Ansco dealer for a demonstration.

ANSCO COMPANY
Binghamton, New York

Ansco Vest-Pocket No. 2 makes 2¼ x 3¼ inch pictures. Equipped with Modico Anastigmat lens, F7.5, $20.00; with Ansco Anastigmat lens, F6.3, $27.50; in Extraspeed Bionic shutter (maximum speed 1/200 second). Other Ansco Cameras $2.75 up.

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To Contributors: Contributions relating to photography in any and all of its branches are solicited and will receive our most careful consideration. While not accepting responsibility for unrequested manuscripts, we will endeavor to return them, if not available, provided return-postage is enclosed. Authors are recommended to retain copies.

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A FUTURIST-PORTRAIT
JOHN PAUL EDWARDS

PHOTO-ERA

The American Journal of Photography

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Vol. XLI NOVEMBER, 1918 No. 5

Wedgwood to Talbot

(Second of the "Professor Pyro" Talks)

MICHAEL GROSS

"AT last Saturday's meeting, if you will remember," Professor Pyro began, "I pointed out that, although the sixteenth century brought to us Fabricius' discovery of the action of light upon nitrate of silver and the seventeenth gave to the world Porta's Camera Obscura, the eighteenth century saw but little advancement in the science of photography due —without a doubt—to the fact that, up to that time, no way to fix the photographic image had been introduced successfully.

"To follow closely upon the developments ushered in by the opening of the nineteenth century, it is necessary that we now shift the scene to England. The year is 1802 and the scene is a porcelain-establishment. However, instead of pottering around with pottery, we discover that the proprietor, Thomas Wedgwood by name, spends most of his time in a little experimental room which he has equipped in one of the workshops. Here we find him busily at work coating small pieces of white leather with silver chloride. On these leather-strips, after much labor, he produces what he fondly calls 'sun-pictures.' These are merely images caused by placing a number of opaque objects upon the sensitized surface he has prepared. The sun turns the exposed portion of this sensitive emulsion black, whereas the parts covered by the opaque object remain white.

"But, like his predecessors, we note that Wedgwood gets no further with his experiments than to produce the image and, noting this fact, we no longer wonder why the air of his little experimental chamber is of such an intense shade of blue. What would you do if you saw the result of years of untiring effort continue to turn black in the sun until the precious images you had succeeded in obtaining were obliterated, leaving not even a trace behind?

"During the latter half of the year 1802, Wedgwood was assisted in his experiments by Sir Humphry Davy, an English chemist of note and the originator of the miner's safety lamp, known to this day as a 'davy' in honor of its inventor. But even the partnership of this learned scholar failed to unearth the dark secret of how to 'fix the image,' if we are to judge by a paper, written by Wedgwood (with observations by Sir Humphry Davy) entitled 'An account of a method of copying paintings and of making profiles by the agency of light upon nitrate of silver.' This paper appeared in *The Journal of the Royal Institution* of 1803, and gives a *résumé* of the photographic experiments conducted by Wedgwood and Davy. At the close of the statement, Sir Humphry Davy remarks that, 'nothing but a method of preventing the unshaded parts of the delineation from being colored by exposure to the day is wanting to render this process as useful as it is elegant.'

"But a good deal of water was to flow under London Bridge before this 'method of preventing the unshaded parts from being colored by exposure to the day' was to be given to the world. It was not until 1819 that Sir John Frederick William Herschel, a famous English scientist, discovered the properties of hyposulphite of soda and its action on the salts of silver. This 'find' brought to an end the chase after the ever-elusive and ever-evasive 'image-fixer.' Without Sir Herschel's contribution to the science, photography, in all likelihood, would not have advanced beyond the point where Wedgwood and Davy had left it.

"To Sir Herschel also goes the honor of having made the first photographic glass-plate. By precipitating iodide, bromide and chloride of silver, and fixing a thin coating of these compounds on a sheet of glass, he succeeded in making a sensitized surface. When exposed and

fixed in hyposulphite of soda, this 'plate' produced a photographic image.

"It might also be well to mention, in passing, that the blue-print process, the manipulation of which no doubt gave you a great deal of pleasure in your amateur days, because of its simplicity and delightful results, was also the discovery of Sir Herschel.

"With a method of fixing the photographic image finally discovered, photography now began to make rapid strides forward. In almost every country, scientists and chemists began to experiment with things photographic and, in England alone, patent after patent was granted for improvements in picture-making processes.

"However, the greatest 'patent-grabber' of that day was—without a doubt—Henry Fox Talbot, a celebrated English scientist. Photographic history records no less than a dozen patents granted to him in as many years. These included everything from a hot hypo-bath to make prints permanent (although Sir John Herschel, if you remember, first used hypo in 1819) to a process of using albumen to give a gloss to the surface of paper and a method to make engravings on steel by means of photography.

"However, despite his 'patent-grabbing' proclivities, Talbot did more for the advancement of photography than did any other man up to his time. He is the true father of photography as it is used to-day, for he prepared his earliest negatives on paper in 1839—a 'film' negative, surely—if, by the word 'film' is meant a negative made on a flexible support. Let me give you, in as brief a time as I can manage it, a summary of Talbot's photographic career.

"Like many of the men who had gone before him, Talbot started along the road of experimentation by using the camera obscura. While working with Porta's invention during a sketching trip at Lake Como, during the later half of the year 1833, he, too, was fascinated by the 'fix-the-image' problem and at once commenced to work on a method by which to accomplish this object.

"In 1834, only one year after he began to experiment, Talbot had already progressed to the extent of coating nitrate of silver on a sheet of paper, drying it, and then exposing the sensitized surface to the sun to form an image. Soon he discovered that the less salt there was in his emulsion the quicker the action of the light would darken it. As a matter of fact, further experimentation convinced him quickly that salt had such a deterrent effect on the progress of the printing, that a bath of salt could be used to prevent the sun from further darkening the image and from lowering its brilliance.

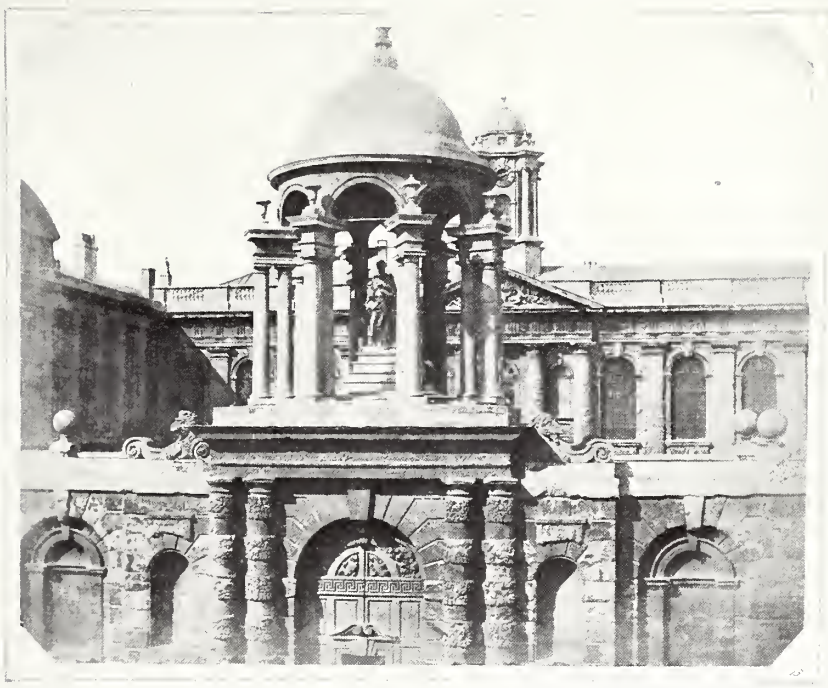
"The next step came when Talbot began to obtain distinct and very pleasing images of leaves, laces and other flat objects by placing them on a sensitized sheet of paper. But when he placed this same paper in the focus of a camera obscura he found that, even after an hour's exposure, the image on the sensitized surface was not strong enough to be discernible. From this stage he worked solely with a view to reduce the time of exposure and finally succeeded—by the use of more sensitive emulsions and a different method of coating the paper—in reducing the time considerably.

"In 1839 Talbot read before the Royal Society a paper dealing with a process which he called Photogenic Drawing or Calotype. The prints produced by this process were made solely through the action of light. Briefly, the method Talbot used can be thus described: He took fine writing-paper and soaked it in a weak solution of common salt. Then he brushed one side of the paper two or three times with a solution of nitrate of silver and, when dry, exposed it in the camera until the image was printed out by the action of the light. This made the negative, which was then rendered transparent by immersing in melted wax or boiled oil, placed in direct contact with a second sheet of sensitized paper and again exposed to daylight. The positive print thus obtained was then fixed in salt-water; but this fixing-medium was afterwards changed to hyposulphite of soda, following Herschel's discovery of the properties of this indispensable chemical.

"In 1844 Talbot published the first book in the world to be illustrated by actual photographs. The title of this work was 'The Pencil Of Nature' and the whole edition was confined to eight volumes. Each book contained a dozen or so actual photographs, about eight by ten inches in size, and on each photograph was pasted a notice to the effect that the illustrations were made by the agency of light alone, without any aid from the artist's pencil; that they were the actual pictures themselves and not, as might be supposed, engravings in imitation.

"I have been fortunate enough to obtain a photographic copy of one of the illustrations which appeared in this book, and you will find it pinned to an easel in the aisle, as you pass out. The picture, you will note, represents the entrance-gateway to the Queen's College, and was evidently made from a window opposite.

"Talbot was so eager to impress people with the fact that the illustrations in his books were different from those appearing in any other volume of his time, that, in addition to the notice pasted to each photograph, he says, in his introduction: 'In this book is made the first attempt to publish a series of pictures wholly illustrated



ENTRANCE TO QUEEN'S COLLEGE — HENRY FOX TALBOT

by the new art of Photogenic drawing. The plates of this work have been obtained by the mere action of light upon sensitive paper. They have been formed and depicted by optical and chemical means alone.'

"But while Talbot was thus experimenting with photographic prints made on paper, other men, in other climes, were blazing a trail in other directions. In France, particularly, interesting theories were being worked out; wonderful experiments were being performed; and many brilliant chapters were being added rapidly to the history of photography.

"But the tale of these developments, and of the men who slaved and toiled to perfect them, is long in the telling, so that I will reserve this part of my narrative until the third 'gathering of the clan' on next Saturday morning."

THERE is no estimating, as yet, the wonderful work photography has already done, is doing to-day, and will do still better in the future, no doubt, in reducing the historical myth and legend, the bounce and buncombe, the deception and concealment, that have always surrounded the making of history. Hereafter, everything will be confirmed, or contradicted, by the facts as they stand in black and white—and, indeed, in colors, in some cases and in motion. Perhaps invention is already on the eve of catching, too, the noise of battle, the very shouts of command, the roar of explosions, the cries of the wounded, and the yelling of the charging lines. It seems almost a profanation even to dream of "canning" such a horrifying cataclysm as a bloody battle. But, perhaps, it will be another aid towards realizing the millennial dream of making an end of wars forever. If ever there were a vivid exposition of the meaning of the Biblical promise that "the truth shall make us free," it would be in the portraying of the real truth about a battle, that would result from complete realistic photographs, and phonograph "records" of it. We know from our own everyday experience in reading the newspapers how difficult it is to get at the real facts of any occurrence—how it takes years of time in some criminal cases, months of cross-examining of witnesses—in political questions, "probes," and reports, and minority reports—and then, when all has been long forgotten, a view may be reached through some personal letter or confession that upsets the whole fabric.

"The Listener," *Boston Evening Transcript.*

How I Beat the Official Photographer

HERBERT W. GLEASON

IT was at the San Francisco Exposition in 1915. I had nothing against the Official Photographer; not at all. He was a very worthy chap, and worked hard to make good the $30,000 bonus which he had given to the exposition-authorities for his exclusive privilege. I hope that he succeeded. But, like all amateurs, I had the self-satisfied feeling that I could make better photographs than he could—for my purpose, I mean—and the exposition-authorities, in view of the aforesaid bonus, put certain obstacles in my way.

It was like this. I had invested in a Century Extra Grand Senior Special 5 x 7 camera, with a whole battery of Goerz lenses, and had parted with a good many hard-earned dollars to pay my way across the continent to see the San Francisco Exposition. I not only wanted to see it, but I wanted much more to photograph it. Indeed, if I had been compelled to choose between the two, I would have very much preferred to photograph it rather than see it. (All amateur photographers will understand what I mean.) I knew beforehand that I was to meet a great number of superb subjects on the exposition-grounds, and life was not worth the living until I had had a chance to capture some of them with my camera.

But when I arrived at the main entrance to the exposition-grounds, I was amazed, chagrined, confounded, and plunged into the depths of despair by what I saw. Just inside the gate there was a big sign with staring letters:

"NO CAMERA LARGER THAN 4 X 5 INCHES IN SIZE, AND NO TRIPOD OR OTHER ARTIFICIAL SUPPORT FOR A CAMERA ALLOWED WITHIN THESE GROUNDS."

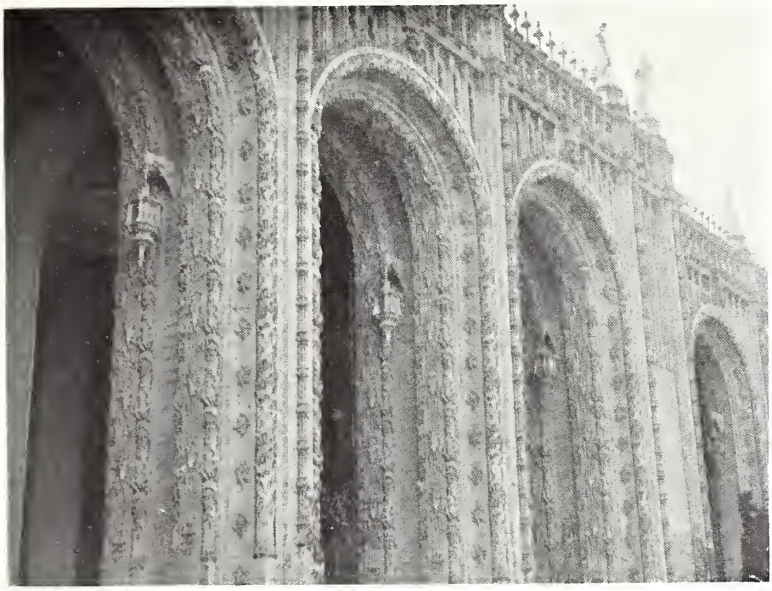
Here was a pretty predicament! Not only was my cherished C. E. G. S. S. camera tabooed, but I could not make time-exposures even with my vest-pocket camera, for there was a ban on the innocent tripod! What should I do? Why hadn't I been content to stay in Boston and make pictures of the Fenway, Echo-Bridge, or the Custom-House Tower!

Then a happy thought struck me. There are exceptions to all rules and, very likely, my case—long distance, heavy expense, extra-fine equipment, specially keen æsthetic sense (!)—might be deemed an exception. So I sought out the exposition-authorities and brought my heaviest guns to bear on them in the effort to get a special permit in my favor. All in vain. They had pocketed the Official Photographer's $30,000, and they felt in duty-bound to protect him. Then I resolved to brave the lion in his den. I went to the headquarters of the Official Photographer himself, and after running the gauntlet of a row of subordinates I was ushered finally into his august presence. (A "professional" always seems terribly august to a mere amateur.) But he, too, was inexorable—big bonus, heavy expense, hard luck, poor trade, slack demand, had to turn down even Burton Holmes, *ad infinitum*. Nothing doing!

This was a black outlook, certainly. But there is one fact which all readers of PHOTO-ERA have had occasion to observe—in the mirror, if nowhere else—namely, that an amateur photographer's enthusiasm is equaled only by his inventiveness. (There's a superb subject for an article, Mr. Editor!) What astonishing results has the amateur photographer often achieved when he has been up against a stone-wall!

To make a long story short, I brought back to Boston nearly three hundred splendid photographs of the exposition—at least, all my friends say that they are splendid—and I never had to part with a single cent for any of the Official Photographer's (deleted) productions. This was the way I did it.

Besides the above-named elegant outfit, I had taken with me on the cross-country trip a $3\frac{1}{4}$ x $4\frac{1}{4}$ Graflex hand-camera, just to make snapshots out of the car-window. This, of course, would be admitted to the exposition-grounds. So the next day I passed through the entrance-gate, swinging my Graflex, and with my head high in the air. And I snapped away at anything I pleased, without a word of protest from anybody. Occasionally the Official Photographer and his assistants, with their big 11 x 14 cameras and heavy tripods, would whisk by me in their automobile, and they would glance at me suspiciously and somewhat scornfully, I imagined; but I paid no attention to them. It was great fun! To be sure, I sometimes longed for a tripod, and once or twice I would have agreed cheerfully to part with a considerable pile of my Boston-made negatives for even a wobbly specimen of that instrument. Yet I succeeded in getting a good many time-exposures, even at night, when an exposure of fifteen or twenty minutes was often necessary. The device was a little awkward; but it worked. The prohibition at the gate was directed against any "artificial support" taken within the grounds; it did



Contact-print from distorted negative



Corrected result by copying

ARCHES, COURT OF ABUNDANCE
HERBERT W. GLEASON



Contact-print from distorted negative



Corrected result by copying

CORRIDOR OF TRANSPORTATION BUILDING, AT NIGHT

HERBERT W. GLEASON

not prevent the use of any sueh support whieh one might find after he got inside. There were a great many seats seattered about the grounds, designed for the relief of tired sight-seers, and by turning one of these up on end, or making a pile of several, one could get a fairly reliable support for his eamera. Burton Holmes said to me one day, after the Exposition was over, that his arm still aehed as he thought of those "tons of settees" whieh he had lugged and the "hundreds of miles" whieh he had earried them in the effort to provide a tripod-substitute.

My Graflex worked all right—aside from the laek of a tripod—exeept in one particular. Being so small, and having no swing-baek, it was neeessary when photographing a high building to point it upwards. I observed on the ground-glass, in eonsequence, that all the perpendieular lines leaned toward eaeh other in a very affeeting way. Yes, it was really affeeting, if you know what I mean. Every building photographed under sueh conditions seemed to have a deeided tendeney to fall over baekwards—distortion, pure and simple. And I knew all the while that my plates would reeord faithfully every sueh distortion. Never mind, I said to myself, we'll see about that later. So I kept snapping away, photographing all sorts of subjects under all sorts of eonditions, and having the time of my life as an amateur eamerist.

But about that distortion? When I got home and developed the negatives, of eourse, there were many where this defeet was painfully evident. I didn't make any eontact prints from those negatives; I was afraid that if any of my friends saw them they would jump at a wrong eonelusion. I simply went to work and tried a little seheme which I had previously employed and which eaused every one of those buildings to appear in a perfeetly natural state, with the perpendieular lines absolutely plumb.

It has often passed my comprehension why good and respectable publishers, with no malicious designs on the innocent publie, should reproduee photographs in which the perpendieular lines are all askew. If the picture was made from a high point, these lines will appear divergent at the top and narrowed at the bottom; if it was taken from a low point—the most common occurrence—the effeet will be the reverse. Not long ago, I attended a lecture on an architeetural subject at the Boston Museum of Fine Arts—of all places in the world!—where the lantern-slides of buildings showed this defect in most glaring fashion. And the lecturer was a distinguished authority in matters of architecture! The remedy is so simple that there is no excuse for this perversity. It has been mentioned before in the pages of the PHOTO-ERA; but it is worth while referring to it again.

Sinee platinum has gone the way of all flesh, I make nearly all my prints on bromide paper. Indeed, for many subjeets I prefer bromide to platinum, anyway. I use a home-made enlarging-device—it works just as well as a redueing-deviee—eonsisting of a board four feet long by ten inches wide, with a support at one end for the negative to be enlarged. On the other end of the board is plaeed an ordinary 8 x 10 eamera, with a bellows-extension of abont twenty-eight ineheS, and with a binding-serew attached which fits into a slot running the entire length of the board through the eenter, thus allowing the eamera to be elamped in any desired position. The negative-support is fitted with kits adapted to hold negatives of any size up to 8 x 10, and works on a pivot. The eamera also has a swing-baek. A sheet of bromide paper of the required size is plaeed in a plateholder, belonging to the eamera, and is kept flat by a pieee of elear glass. In making a print from one of these offending negatives, the negative is plaeed in its appropriate kit and then inserted in the negative-support upside down—if the vertieal lines lean toward each other at the top; if otherwise, then it should be right side up. The negative-support is then swung on its pivot so as to bring the bottom nearer the lens of the eamera—just how mueh will depend on the amount of the divergenee of the vertical lines, and this eau be determined only by experiment with eaeh individual negative. The swing-back of the camera is also swung out from the top. The apparatus is then plaeed on a table, with the negative toward a window—preferably covered with tissue paper or a sheet of ground-glass—and with the lens wide open. Foeusing is done on the ground-glass of the camera. After a little experimenting, tilting the negative or the swing-back or both as required, it will be found that a positive image of the negative ean be obtained in whieh the vertical lines are absolutely true. Owing to the tilting of the negative and the swing-baek of the eamera this image will not be equally sharp in all its parts. It is best to focus sharply on the center of the negative; and then, by stopping down the lens, entire sharpness can be obtained all over the image. A plateholder with its sheet of bromide paper is then inserted in the camera and the proper exposure made.

One caution is needed. The thickness of the glass that covers the bromide paper in the plateholder must be taken into aeeount in getting the correct focus, as the ground-glass of the camera is normally adjusted so as to bring the focus of the lens on the film-side of a glass-plate. It is



Contact-print from distorted negative

therefore necessary either to reverse the ground-glass of the camera or to rack the lens back sufficiently to bring the paper in the exact focus.

It was in this way that I beat the Official Photographer. I not only obtained an extensive series of 5 x 7 prints, in every way quite as good as if I had made the negatives with my Century camera and a ten-pound tripod, but I also made about two hundred lantern-slides, using exactly the same method to correct architectural defects as described above, and these have since given pleasure to a great many people who could not visit the Exposition.

It is amazing, by the way, that bromide paper is not more popular with amateur workers in the making of small prints. It is a mistake to suppose that this medium is adapted only to "enlargements"—a word which bristles with difficulties in the minds of many amateurs—made in a specially-equipped darkroom. As a matter of fact, it can be as readily used for contact-printing as any gaslight-paper, and the finished print possesses a much greater depth and richness of tone. If the high speed of the paper is objectionable, this can be modified easily by printing under a sheet of yellow tissue-paper. But there is a peculiar satisfaction in making prints in the camera, according to the method indicated above; for this not only does away with the necessity to expose the paper in a dark-room, but it allows prints of a uniform shape to be made from negatives of any size. It also gives the worker a chance to revise the composition of his subject. Instead of making a contact print from a 5 x 7 negative, for instance, and cutting away the offending portion, it is a very simple matter to make a full-sized 5 x 7 print from any part of the original negative. Of course, the size of the print is limited to the size of the camera used; but oftentimes a second-hand 8 x 10 or 10 x 12 camera (without the lens) can be purchased for a very small outlay; or, with a few tools and a fair amount of skill, one can make a box-contrivance of any desired size which will answer every purpose.

EVERY day that we spend without learning something, is a day lost.—*Beethoven.*



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Modern Lenses and Their Uses

J. A. DAWES

I AM not going to keep you here very long. I didn't know that I was going to speak to you at all, until yesterday noon. I have no prepared speech. This is merely an informal talk about something that concerns every one of you in your business—your lens. I shall try to steer clear of that which might be over our heads, but stick to lenses as they interest you—after the factory has pronounced them all right. Not why this curve is so and so, or why this separation should be so many millimeters, or why this curve is made so, but what will this lens do that I have in my hand. Why don't this one serve in enlarging; why will this one make portraits and not answer for commercial work; why can't I take my commercial lens and put it on my portrait-camera and succeed?

A long time ago, manufacturers were making virtually one type of lens. They were called portrait-lenses. They were big chunks of glass, ground and polished and fixed up—things you had to attach to your camera. You were able to do beautiful portraiture. You were able to make heads that just stood out as though the person were speaking to you. Why? Because the lens had a curved field giving a standing-out effect, and because the lens had great focal length giving you perfect perspective. But modern photography has changed all that so that to-day you do not want a 42-centimeter lens; you do not want one of these big sort of cannon to put on your camera, for your studio won't stand it. You have come down to small studios. You are going into the homes, and the homes are getting smaller every day as the prices go up. We have had to modify that original formula into a modern portrait-lens, that was suitable for your modern studio. You have to-day lenses that range in speed from F/3.5 to F/5, or thereabouts, that still have the curved field, that still give the outstanding effect. They are good for bust-pictures, large heads, three-quarter lengths, standing figures and, with a little more stopping down, for small groups. But they are absolutely impracticable for a large group, because the curved field of that type of lens means that if you focus your group in the center, the ends are out of focus; whereas, if you are making a picture of a group in your studio, you must know the knack of using it to get the best possible results with that lens; but the results will not be as good as they would be with a standard group-lens. You can either semi-circle your group, so as to take up the curved field of your lens, or you can focus your group one-third in from each end and equalize the curvature of your lens and get a sharp picture, although you will have to sacrifice a little bit in speed.

Then came the problem for the optician to make a lens that would produce these groups, a lens that would give more speed and covering-power, that was corrected, one that would define that group absolutely sharp. So there was produced the Anastigmat for the photographer who wanted a speedy lens for groups. Those are lenses with moderate focal lengths for the size plate they cover, full covering-power and great speed. They are suitable for groups; they are suitable for home-portraiture. That lens is suitable primarily for groups and for home-portraiture because of its compactness, its speed and moderate focal length. Some photographers are taking that lens and using it for all purposes. I want to call your attention to one fact, and that is this: it is the nearest approach to an universal lens that has been produced, but there has not yet been produced a lens that can be called universal. There is no lens that you can use with equal satisfaction for your portrait-work, your studio-work and your home-portraiture, but the nearest thing to it is a speedy Anastigmat with as great a focal length as the conditions under which you work will permit. Some of those Anastigmat lenses have a focus of 14 inches, 16 inches, and longer, and are equipped with a diffusing-device which will enable you to do splendid work; but the Anastigmat with a diffusing-device will not produce a single portrait with the same outstanding, stereoscopic effect that a regular portrait-lens will produce.

Now we come to the man who wants to get some of the qualities that Mr. Hutchinson has been talking about, the kind of work we see exhibited here in a good many of these displays. Because it was a novelty, the manufacturer was considered a crank and a fool and a fanatic when he gave to the profession a soft-focus lens. It is a lens that is a little under-corrected for chromatic and spherical aberration. It is designed primarily for the person who wants to sort of breathe, you might say, through his lens to his negative that which he sees with his eyes, who wants to suppress that little minute detail which the eye overlooks. If he makes a landscape, he doesn't want to see the veins in the leaves, or the little crevices in the bark of the tree. He wants to see a gentle, harmonious grouping of things,



PLOUGHING IN BURGUNDY

HORACE A. LATIMER

so he takes his soft-focus lens and goes at it, and gets the natural thing.

There is a peculiar thing about using a soft-focus lens. Some one wrote an article some time ago on the Visual Point of Focus, and the idea was this: that you might go out and look at a landscape, and I might go out and look at the same landscape. I see it one way and you see it another way. I take my photograph and say it is wonderful; you might look at it and say it was awful. You may go out and take a photograph the way you see it, and I may say I don't see it that way. So with a soft-focus lens you have a variety of degrees of diffusion, which is controlled by the aperture which you use. If you open your lens wide, you get a maximum of diffusion. It is there for the man who wants it. If you want that extreme degree, you can have it. If you do not, you stop your lens down till you get the result that suits.

Then you come into portraiture. You meet a man on the street, for instance, and you look at him. Somebody else looks at him, and says, "Did you notice that little mole he had?" "No, I didn't"; but if you took a picture with a sharp lens you would notice that little mole. You get things that the eye overlooks altogether when you take in a person in general. But with a soft-focus lens you eliminate that. You can get that man as you see him, with atmosphere all around, and he just sits there and sort of speaks to you from the picture. That lens was made because a few wanted it; to-day it is in almost universal use. I think if I would ask for a showing of hands here of those who have a soft-focus lens, a good many hands would go up.

But recently the soft-focus lens has found its way into a new branch of service—the enlarging-field. Many photographers are making their pictures with their sharp lens in the studio and then enlarging them, or as a man with a studio at the Waldorf-Astoria says, "projected prints." All our pictures are made by the new process of projection, and this man gets $300 a dozen for some of his work because he is in the Waldorf-Astoria—"prints by projection." Now, it might be well if we would get away from the word "enlargement." It has been commercialized too much. We have seen too many of these enlargements at 50 cents or 75 cents. Let us get away from that word, and say "we made these by projection." Just as the Gerhardt sisters do not sell blacks and whites; they sell printed grays. Of course, that has put a little more money on the price. So the enlarging-field has been benefited tremendously by the use of the soft-focus lens. Photographers, through the middle west particularly, are making their dozen pictures in the way the sitter orders them, and then on speculation they are making a very beautiful enlargement by projection through a soft-focus lens, mounting it in a beautiful little frame and placing it on the counter, just at the time that person is apt to call for the pictures. When the customer calls to get what he ordered, lo and behold he sees this thing on the counter and wants it because he can't have it. It has been made for display, and the photographer needs it, but finally consents to sell it at a fair price.

The commercial men have no use for this lens I have been talking about. They want something that is sharp, something that is wiry, something that is full of definition, something that will cover to the extreme corners, something that will give the detail that is in a thing, because detail is the byword of the commercial worker. He has to get pictures of machinery, pictures that show every little detail, pictures that show the threads and the screws, and the little hinges and the nuts and the pins and all. He wants SOMETHING SHARP, so there is produced for him and his kind an Anastigmat that is lower in speed than the F 4/5 that the portrait-studio man uses. F/6.8 or F 7/7 is about the speed of the commercial Anastigmat. That is a lens fully corrected. If he wants something fuzzy, he can enlarge it through a fuzzy lens. Catalog-people want the detail, because in reproduction a great deal is lost. So that type of lens has been produced for the commercial man.

Then we have the amateur, and we have an F 6/3 or an F 7/5 Anastigmat for the hand-camera. Some commercial men are up against an entirely different proposition. There is a big building across the street and it is rather a narrow street. They must make a picture of it and get it all in. Their lens won't do it because the focal length is too great, and the angle is too narrow, so there are wide angle Anastigmats, perfectly corrected, short focal length, covering-power and definition that enables them to work in confined places, and to get in all of their view without backing into the next room, or pulling down a house to get the picture they want to make. That is the scope of the wide-angle lens—for the man that must work in confined spaces.

Now, there are some questions that come up about lenses—depth, for instance. One might say: "I have a 12-inch F/4.5 lens that has more depth than Brown's 12-inch F/4.5 lens." Do not make that mistake. Depth in a lens is dependent upon the focal length and the aperture. They tell us that the pencils of light that come through a lens to the plate one one-hundredth of an inch in diameter, or less, are sharp; anything



RUTH R. TROWBRIDGE

wider than that is not sharp. Now if we stop that lens down the effect is the same; but the angle of the rays of light is much more acute. Consequently, we have a great deal more depth between the point where it is one one-hundredth of an inch in diameter and the other point back of the focal point. So you can see that focal length and aperture control the amount of depth, irrespective of what make of lens you are using. There is a difference in definition. One lens is ground to give more definition than another. That is due either to the lack of ability on the part of the optician to grind his lens perfectly, or to an unusual circumstance where a lens gets past the test without measuring up to it. In that case, irrespective of what lens you have, or who made it, write the manufacturer a nice little letter—please make it nice—and send it in to him, and he will correct it. I think I am safe in saying that there is not a lens-manufacturer in this country to-day who is not eager to have the photographer return any of his products that do not meet the requirements, because we lens-makers have all discovered that an inactive lens on the shelf of the photographer is not a good thing for us. We want that our products be *used;* for it is only insofar as they *produce*, that it is going to do us any good. That is the true feeling of all lens-makers.

Now, we come to the question of cleaning lenses. A great many people wonder how they ought to clean their lenses. Should they take a bottle of alcohol and spill it all over them? No; let alcohol alone. You may read in some British journals and some magazines to rub them with alcohol. Better let alcohol alone. You don't know that it is absolutely clear alcohol, you don't know but it has particles of grit in it, you don't know but there is danger of scratching the surface of the lens, and as soon as you scratch the surface of the lens, you impair its speed and you destroy its defining-power. Get a little piece of hand-made Japanese paper, or a clean cambric handkerchief. First, with a camel-hair brush dust the lens, then breathe on it and rub it very gently until it shows up brightly. Do not rub it hard. There are a great many times when atmospheric conditions will cause a lens to be cloudy. It is a simple matter to unscrew the retaining-ring, remove the glasses, clean them thoroughly and put them back; but be careful, when you remove them, to note the way in which they are placed, and put them back so you do not destroy their arrangement. There is no need of a week's delay in sending them to the factory to be cleaned when you can do it just as well. In the case of a cemented lens, it will sometimes turn yellow. I have had a number of men say that their lens was useless because it was slow. A cemented lens is subject to deterioration. It will turn yellow, and eventually look something like a rainbow, or like oil on the surface of water. All that is necessary to do, in that case, is to return it to the manufacturer and order it re-cemented. The manufacturer gets it, re-cements it, returns it to you, and it is every bit as good as it was the day you got it. Do not discard a lens because it is discolored. Have it re-cemented. The price varies from one to four dollars, and the expense is not noticeable in comparison with the service you will get out of the lens.

Some people complain about air-bubbles in their lens; but air-bubbles do not affect a lens, at all. Air-bubbles are really a mark of quality. In the process of fusing the glass from which high-grade lenses are made, it is brought to a certain temperature. The ingredients are

brought to a certain point, and at that point the operation must cease, irrespective of whether all the bubbles in that glass have risen and broken or not. The bigger bubbles will have risen to the top and broken, but the little bubbles will not and so, when the glass is cool, those little bubbles are still there, proving to you that the glass of which your lens was made was brought to the proper constituency.

The quality of lenses that you receive from different manufacturers to-day, as before the war, is guaranteed to be equal to any that have been provided. They are guaranteed to measure up to the standard tests set for them, and they are guaranteed to be made of glass of equal quality to those you have received. The glass from some foreign countries is cut off, but the glass from other countries is not entirely cut off. In America, thank Heaven! we are making a quality of glass that is excellent. We have made lenses from American optical glass that have surpassed tests for that same lens made when we were depending entirely upon the foreign market for the glass for lenses. It is encouraging. I think I am safe to say—as I have said to the dealers of the country—that after this war is over, America is destined to be the optical center of the world. We are making in this country a tremendous amount of optical equipment for the government. Optical concerns throughout the country have increased their plants wonderfully. They are building and re-building in order to take care of requirements. That commercial greed of Germany is going to turn back on her like a boomerang, and is going to smite the industries of Germany and put them out of commission in this country. The boomerang is on the way back now. This country is going to be the source of supply for optical equipment for the world when this struggle is over. I am in touch with that. We can see its growth. I think I know what I am talking about when I say that.—*Talk delivered before the New England Photographers' Convention.*

Our Equine Friend

GRACE C. RUTTER

MORE than one wise man has said that horses know more than men. Allowing the term a little latitude, those who have been raised on a farm or have worked among horses, will readily confirm this. Unquestionably, the horse has a strong reasoning-power; but in all animals there is first and strongest an instinct of fear. That which is new to them is to be approached with caution, eyes, ears and nostrils working at full capacity, and with heels ever alert to carry their owner into safety should the strange object prove dangerous. One cannot wonder then, that the camera and tripod with focusing-cloth waving in the breeze, should be an object of dread, and, unless it is often photographed, the intelligent horse should look with apprehension at this strange object bearing down upon it. Occasionally, one meets a photographer who is gifted with a sixth sense of having "a way with animals," and this happy person can put an animal easily at ease before the lens and, consequently, make the most successful photographs of them. Unfortunately, a mere love of animals does not always include this gift, and, although I have the former, I am sadly conscious that I lack the latter, even while I admire all intelligent animals and could never be unkind to any. Perhaps for this reason, my accompanying photographs are illustrative rather than pictorial.

Foreshortening of the limbs is a fault which it is easy to make, if you get too close to the subject. There is danger of this result in pictures taken "head on" or with a short-focus lens. A little practice will teach the beginner to avoid this ungraceful pose. If a long-focus lens is not available, a safe rule is to place the camera about thirty feet distant from the subject. The consequently smaller image is preferable to the alternate of bad perspective.

To render a subject from a natural viewpoint, the height of the camera is very important, as its apparent size is determined largely by this factor. Usually, a satisfactory result is obtained by placing the lens on a level with the eye of the subject. With very large horses, where the full extension of the tripod fails of this, the few inches' difference will effect no harm if one is sufficiently distant to allow a good perspective. In photographing colts or ponies, of course, it is easy to "take a reef" in the camera's legs to bring it down to their eye-level, and thus avoid distortion, so common in photographs of animals.



MOTHER AND SON GRACE C. RUTTER

I prefer to place the camera at sufficient distance to include a generous background, and, except with very beautifully formed animals, find a side-face view the most satisfactory. With some horses, which were so restless that I despaired of getting any picture, I have had to be content with any view I could get. You can easily see that "Mother and Son" is one of these, despite her calm expression. Sprawled hind-legs, at least, give some idea of their shape, which blurred ones would not; her head, too, kept time with her feet, and it was a forced choice between an underexposure of an ungraceful pose and full exposure with risk of a blurred image. "Son's" coltish activity, you may know, was not likely to calm the photographer's nerves; but one could forgive that endearing baby-face, full of mischief and curiosity, a great deal. At least, the background did not kick up its heels and scamper around.

Speaking of backgrounds, this is an item that one must choose in harmony with the subject. A simple composition is always the most satisfactory. The lines of buildings and fences present so many distracting lines, they should be avoided, unless distant and indistinct. Personally, I prefer shrubbery with a little sky visible, as it is more cheerful than all shadow. To throw the subject more prominently before the eye, there should be considerable space between it and the background. Proper lighting and a full exposure will take care of a difference in tone between the two, even a black horse and dense, green shrubbery. Even white horses taken against blue sky can be rendered in a satisfactory degree of contrast if the light falls sidewise across them, and the background is thrown slightly out of focus by a rather open stop. A color-sensitive or backed plate will help to differentiate the tonal values of the "white" horse and the blue sky. Most likely, the sky will turn out to be much the lighter of the two and thus supply the needed contrast.

It is all right to speak to a restless horse which you are trying to photograph, although your words may have small effect on it, but do not move the black-swathed camera around any more than is necessary and do not bring it too near the animal. It is best to have the camera set up previously to bringing the horse out, and have the owner lead it into the desired place. For the trotter, especially, you must have a rapid plate, a bright sun, and a speedy lens and the ability to move quickly and finish the exposure as soon as possible, for every moment the creature is apt to become more nervous. I have

found the trotting-horse the most difficult animal I ever undertook to photograph. He is bred to go, trained to go, and he expects to go as soon as he is led out of the stall.

Sometimes, a horse stands with a sagging head, or generally tired or dejected expression, which would not look well in a photograph. To remedy this, even a woman is justified in uttering a loud "whoa!" or a quail-like, shrill whistle, which will usually cause the animal to prick up its ears and stand at attention. Herein, a word of caution is due—it is the first and second whistle or call only, that attracts his attention, for after those he takes the sound as a matter of course. Therefore, do not whistle while focusing—or but once, anyway—but reserve it to spring on his ears at the instant of exposure. If you are too ladylike to whistle—I am not—perhaps you can bribe someone to stand where you want the horse to focus his gaze, and pound on a tin pan, once or twice. Then watch your subject respond as to a battle charge. If horses could laugh, they would surely appreciate many a joke at the lordly humans' expense. I know that I have sometimes been so convulsed with laughter, when forced to resort to the above methods, that I could hardly keep sane enough to squeeze the bulb at the right time. To watch a sedate spinster *try* to pucker her prim lips into a whistle, while I photographed her driving horse, was a most-evident joke, especially as this descent from dignity was made under protest, and only for dread lest the picture be unsatisfactory. Do you never see people you would just love to make whistle, or do something more undignified? I believe that I lost a good X by not having another camera in operation focused on her! Any comic editor would have jumped at the chance to buy such a picture.

In fly-time, even if making a picture of a slow, old plow-horse, when you come to measure the fast working of his tail against your anastigmat lens, the lens is frequently outclassed, as you can see by Star's blurred tail. In spite of your chagrin at the result, you are forced to admire the quick response of his nerves when the enemy attacks.



LADY GRACE C. RUTTER

Do not laugh at me; but I always like to read character in a horse's face. "Lady's" pampered life shows in every lazy length of limb, as she stands licking sugar from her mistress's hand, all unashamed of her uncurried flanks. I daresay that she is being bribed to have her bath, and I do know that she works little and leisures more, frequently rebelling by "balking" when asked to draw a load.

Lady is responsible for one of the regrets of my photographic life, and it is that I did not have my camera on hand when she performed such an athletic stunt as would always have been interesting to look at. My brother had loaded the light wagon, then led her out and hitched her



THE HAULING-TEAM
GRACE C. RUTTER



STAR GRACE C. RUTTER

to it, preparatory to doing a little farming. At the first step, she signified her unwillingness to go by rearing high into the air, pawing the atmosphere with her forefeet, and remained in that position for several seconds. What a picture it would have made! Now that the opportunity has passed, I regret that I never prepared to catch her on one of these tantrums, for she frequently indulged in them, though always without warning. The fact that she reared when she felt like it, whether loaded or light, led us to question whether some forgotten strain of circus-blood might not prompt such tricks. But my brothers credited it to pure ill-temper, since her favorite stunt was to rear, then balk, and refuse to draw the last load when the boys were tired and supper was ready. At times, we children felt angry enough to hate her; but we soon overlooked her lapses when she would whinny in answer to our call, or knock on the kitchen-door for a drink.

"The Hauling-Team," with their black bodies against the snow in the soft light of winter woods, was not an easy subject, as light-values were so deceptive, and underexposure so easy. But they were good posers. Stolid, dependable workers, they clearly are, nothing skittish or trivial about them—plain, everyday heroes.

"Star" approaches the camera cautiously, ears alert, frankly curious, yet unafraid under his master's rein, in spite of his partner's evident alarm and retreat. These gentlemen do not have their pictures made every day. They are broad of hoof, bred for plowing in fertile fields, and hauling heavy loads in sandy wood-roads. They are working-gentlemen, with many duties for each day, the partner of the American farmer, and none has a better right than "Star" to hold up a high head. For do not he and his class feed the nation and our allies? He deserves every ounce of corn that his labor-whetted appetite licks out of the corners of his manger, every straw in the bed whereon he lays his work-weary frame, and every hour of Sabbath-rest in the pasture. Surely, it is an existence in accordance with Gospel-laws, and worthy the respect of mankind. Farm-horse, we salute you!

The trotter is a beautiful object to the eye, but who dares censure useful "Star" if he looks with contempt on the blue-ribboned thoroughbred, and with discerning horse-sense despises those slender legs which never carry their owner into one round of useful work, whose life consists of much grooming, county-fairs and horse-shows, grandstand-applause and a few ribbons, and lives only to be admired, and for nothing better than running? We class him with a ballet-dancer and accord both equal respect.

Patriotism and Commonsense

C. H. CLAUDY

A MAN whose ideas of patriotism were so violent that he undertook to correct with a pistol certain of his neighbors whose loyalty was more controlled and less exuberant than his, found himself in the dock with a judge considering his case. A doctor or so said that, although he wasn't exactly insane, he was suffering from a delusion caused by exalted love of country. The judge said that in these days he didn't see his way clear to condemn any man for having too much patriotism and let him go with a warning about carrying fire-arms.

There is no such thing as too much real patriotism. But patriotism and loyalty, let run wild and uncontrolled, can do almost as much harm as pro-Germanism. It is for us all to guard our patriotism as we guard any other mental and moral attribute, and see to it that it doesn't run to seed from too violent growth. We all know what happens to the man whose religious enthusiasm becomes a mania, and we condemn, not religion, but the man. Patriotism may become a mania, too, in which case it is not the patriotism but the maniac who is to be condemned.

I have a letter from a photographer who tells me that he had three fine German-made lenses. "Had," because he smashed them with a hammer and threw the pieces away. Now he wants to know where he can buy some good American-made lenses to take the place of those he smashed!

I don't know and if I did I wouldn't tell him. His patriotism has run clean away with him. The United States Government is having a hard time to get lenses. It needs all it can get. For anyone to destroy a lens, no matter where made, is none the less a crime against this government that it was dictated by a real feeling of loyalty. Three lenses, which might have done good work against the Germans who made them, are destroyed—three new lenses of American make must be "withdrawn from circulation" and the use of the government to take the place of those ruined.

The United States Government hasn't sunk the German ships which were left in New York—it seized them, repaired them, is using them. The scientific departments of the government are stocked with German-made apparatus—valuable, well-made, expensive apparatus. Are they less useful, these microscopes and optical instruments, this glassware, these chemicals, because they were made by our enemies? When United States troops capture German food, guns or munitions, do they destroy them—or turn them against their makers?

We have in this country a large number of alien enemies. They are listed, known, checked up, made harmless by government-supervision. Some are enemies at heart, some are merely technical enemies, in that they are of German or Austrian birth and not naturalized. At least one photographer of my acquaintance has refused to make pictures of such people when he knew of them, on the ground that he was "giving aid and comfort to the enemy."

This, as far as my limited vision goes, is ridiculous. The "alien enemy" is making his living here and abiding by the laws of this country. The more money he spends, the more money there is to pay taxes and buy bonds. If a hundred thousand alien enemies labor in this country at peaceful and harmless pursuits, this country is the better for a hundred thousand days of constructive labor every twenty-four hours. It is, perhaps, too much to expect an alien enemy to buy bonds or W. S. S. or contribute to the Y. M. C. A. or the Red Cross. Hence, those of us who *are* patriotic and loyal Americans can serve the better the more money we can make from the alien enemy. Money is impersonal. "Tainted" does not apply to that made by the alien enemy, *if it can be made to labor for Uncle Sam*. There was a certain trust-fund in one of our colleges, established by the Kaiser some years ago as a compliment, for the pursuit of some research or other. That fund is now invested in Liberty Bonds and the Kaiser was sent a Liberty Bond button at the time the investment was made. Probably he doesn't wear it, and we hope his joy at the feeling that his money was buying bullets to shoot Germans was controllable. But we didn't take his gold and throw it away—we *used* it!

It is right and proper that we deny the teaching of German in schools, not that the German language is any the less valuable to the student than before, not that the knowledge locked up in German books is any the less to be used than before, but that we refuse to sanction the teaching of our youths the language of our enemies, that they, the youths, realize the seriousness of the menace of all that is German. Our bands do not play the German national anthem, not that it is any less admirable as a piece of music than it used to be, but because of what it stands

for, what it means. After the war it will be a long, long time before "made in Germany" will help the sale of any article, not that the Germans will be any less skilful as artificers after the war than formerly, but because this country will not want, will not have, anything which helps the enemies of civilization to escape the consequences of their misdeeds.

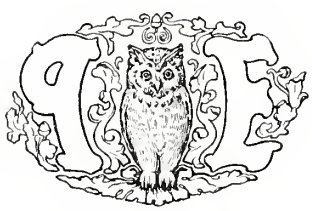
But the idea that things which *have been* made in Germany must not be used *now*, is a mistake. Use them—turn them against Germany—hoist her on her own petard. Don't break up your German lenses—if you can't use them yourself, send them to the Signal Corps. Don't scrap your German telescopes and binoculars—give them to the Navy and let German-made lenses discover German submarines that American depth-bombs can put them where they belong! Don't refuse the money which comes from the German or the Austrian—neither can help their birth and neither can get home. Don't let them save their money to the end of the war to send home, then, to help Germany and Austria get it—get all you can of it, and turn the product of alien German and Austrian enemies into Good United States W. S. S. and Liberty Bonds.

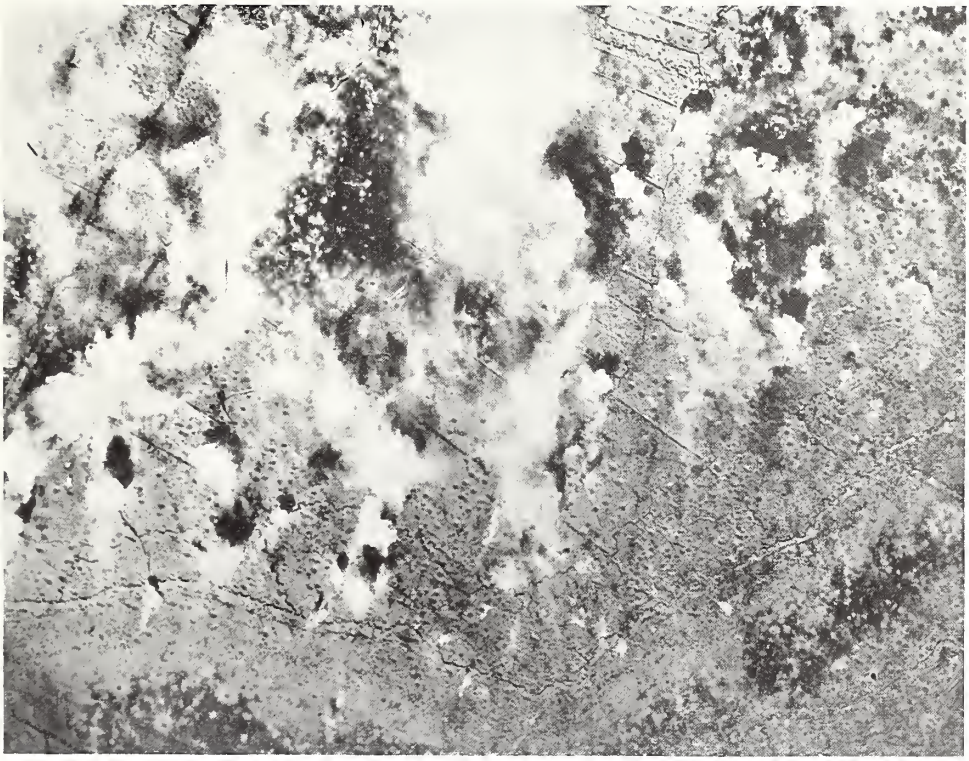
In other words, have commonsense behind your patriotism—don't express it with a pistol, or a mania—express it with Americanism, and use it, where you may, to make Germany help fight Germany, to hasten the day when the Stars and Stripes fly from the palace at Potsdam and the long, long line of khaki walks up Unter den Linden with Pershing at one end and the Kaiser's goat at the other!

Bulletin of Photography.

Meeting a Change

WHEN the present abnormal conditions come to an end, and there is no longer an influx of "khaki" sitters, photographers must be prepared for many changes in the general run of things. There has been a great accession of female workers in all grades, and it is quite likely that they will retain the positions which they have so efficiently filled for the last few years. Portrait-photography is an occupation in which an artistically-minded woman is thoroughly at home, and now that manufacturers have made the purely technical part so simple, there is little that calls for the superior scientific knowledge or physical endurance of the "stronger sex." In face of this competition, it would seem advisable for the old-established photographer who finds that portrait-work is a diminishing quantity to turn his manipulative experience and scientific knowledge in another direction, and to take up the technical and commercial work which will be greatly in demand during the coming period of readjustment of our manufactures and trade. The first thing to be done is to find out what class of photograph is likely to be required in the district to be operated in, and the next to prepare a set or sets of good specimen pictures. Armed with these, the manufacturers and dealers who require illustrations may be approached with some chance of success. One point must not be overlooked: the photographer must create the demand as well as satisfy it. It is of little avail to ask if photographs are wanted; it must be assumed and asserted that they are wanted, that they are indispensable, and that the photographer is at hand to supply them. Another field worthy of more attention than it usually receives is that of outdoor and "at-home" work. In many districts, photographers have been so indifferent to this that they have allowed London firms to sweep the country under their very noses, and to take substantial orders which might have been theirs for the asking. This is a field which will not be invaded by the ladies—there is too much hard work about it—and the technical knowledge necessary to carry it out successfully is not likely to be acquired by the present generation. So far, we believe that values and orthochromatics are sealed books to the lady operator, whose artistic qualities are usually her greatest asset.—*British Journal.*





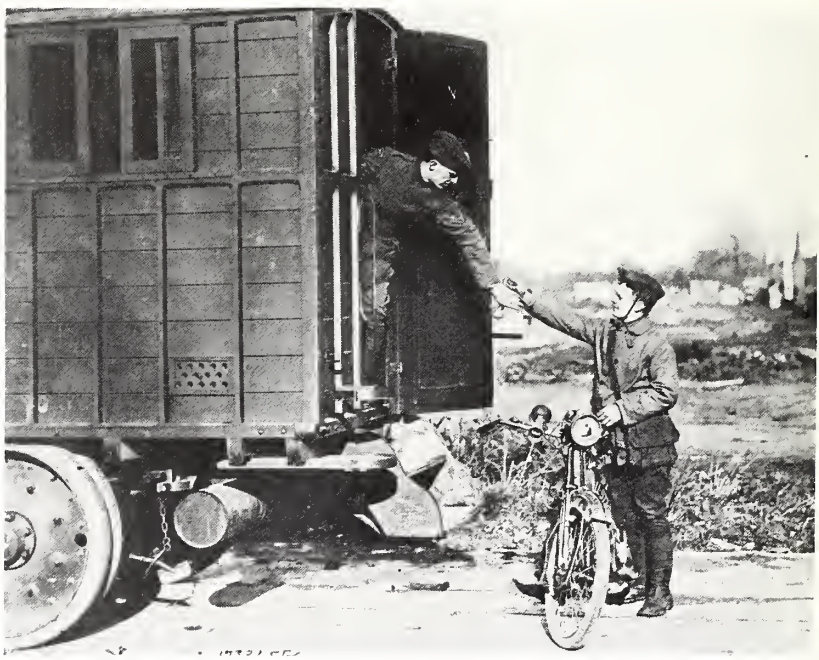
A BRITISH BARRAGE-FIRE KADEL & HERBERT

Aërial Fighting-Cameras

WILFRED A. FRENCH

IT is very well known that the most important factor of successful offensives in modern warfare is aërial photography. This knowledge, combined with the fascination of the scope of action and the glory of successful achievement, has created tremendous enthusiasm among our young men, and thousands of them have engaged in the aërial service, despite its hazardous character. But inasmuch as the sole object of the aviator at the front is to gain information, and in as quick and reliable a way as possible, the camera has become the principal means to that end. Thus, aërial photography has developed into an important science, and one which calls for unquestioned courage, skill and physical fitness. Usually, the duty to secure aërial photographs falls to the observer who, in company with the pilot, flies over a certain enemy-position at a height varying from 10,000 to 15,000 feet, and obtains excellent results. A year and a half ago, all photographs were made at about 5,000 or 6,000 feet; but to-day the fire from the anti-aircraft guns is so accurate and intense, that photography at such heights is impracticable and unnecessary, owing to the risk to pilot and machine. His object is to locate hostile guns and trenches, camouflaged positions and objects, to photograph them and to despatch the exposures as quickly as possible to headquarters. Frequently, the commanding officer and his staff desire to study the topography of a newly captured town, or the way a command is being carried out. Instead of doing this from an elevated and exposed position—as was the custom in the wars of the past—the commanding general, in a place of perfect safety, inspects photographs that were made, only a few minutes before, by his aërial observers. An important asset in the hands of the advancing troops is a

map of the objective, be it a town or a defensive position. This requires a series of photographs which can be obtained successfully only when the airplane flies in a perfectly straight line, swerving neither to the right nor to the left and maintaining an absolutely uniform elevation. Prints of these different map-negatives—sometimes as many as fifty or more—are subsequently pasted on a large sheet of cardboard, overlapping, and a map is quickly constructed which affords



A MOTOR DEVELOPING-CAR UNDERWOOD & UNDERWOOD

the commanding officer a satisfactory survey of the terrain and enables him to study the relative situation of buildings, trenches, gun-positions, airdromes and "ammunition-dumps"—with due allowance for camouflage—or the extent and magnitude of the damage inflicted by an air-raid. But the enemy is not slow. Knowing that his position and defenses will be observed and photographed, he is prepared to destroy or drive back the aërial photographer, and anti-aircraft guns—"archies," as they are jokingly called by the allied airmen—make his life miserable, even at an altitude of 15,000 feet above the earth. Yet, with shells exploding about him, even damaging his plane, the intrepid photographer continues his precarious but effective work, and generally returns to his base with the priceless records which, transformed immediately into visible pictures, enable the commanding general to initiate an attack that may result in an important victory. Determined to frustrate the ally-photographer's attempt to obtain successful pictures, the enemy will resort to camouflage and other forms of deception. In order to mislead the aërial spy, he will deliver his effective gun-fire without visible concomitants and employ simultaneously dummy-guns discharging white smoke, or resort to such simple means as a fire and blowing the smoke through the port-hole of the emplacement. The experienced observer, accustomed to the ruses of the enemy, can distinguish the sham from the real and, in case of doubt, will obtain photographs of both kinds of gun-fire. Having secured the coveted pictures, the photographer hurries back to headquarters or the most convenient station, hands the box of exposures to a messenger waiting on a motor-cycle, and is off again on another photographic expedition. The messenger speeds to the near-set photo-finisher, waiting in a motor-darkroom,

and is soon on his way with the damp but completed prints to the commanding officer. It is not unusual for the officer directing the attack to be enabled to inspect an important photograph of the enemy's lines within fifteen minutes after the exposure was made by the aërial camerist, miles away. But this feat is made possible only by utilizing the photographer's time during his return to the base; for instead of waiting until he can deliver the exposed plates to the messenger who is to convey them to the nearest developing-station, the aërial camerist transrequire some form of visual proof before allowing credit for every plane brought down or damage done by bombing. Consequently, the aviator often carries a camera with him, with which to bring back proof of feats achieved. In the photograph of the warmly dressed aviator speculation can be indulged as to what achievement of his the photograph shows; but the smile clearly indicates success in his venture against the enemy. Of course, were it not for the perfection of the modern airplane, photography in the air would hardly be possible. Formerly, the aviator was

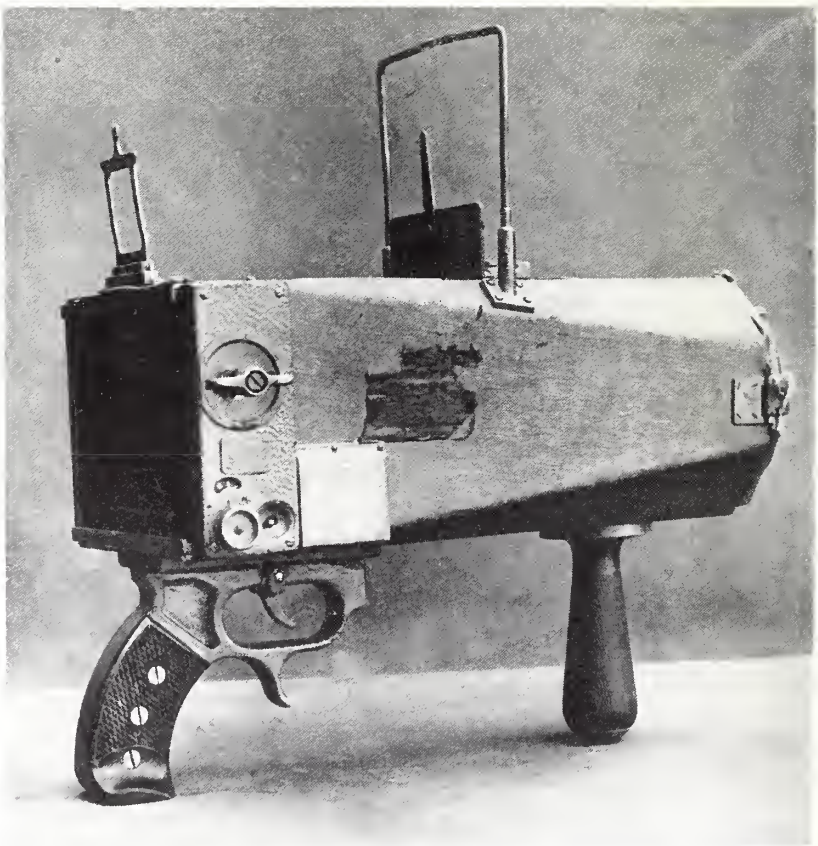


AVIATOR EXAMINING AËRIAL PHOTOGRAPH UNDERWOOD & UNDERWOOD

fers the exposed plates to a daylight developing-tank for a few minutes, then fixes and rinses them. The messenger in waiting rushes the wet negatives to the finisher, who very quickly produces the required prints. Another expeditious practice is to put the exposed films or plates in a metal watertight container having a parachute attachment. By the mere pulling of a cord, the miniature parachute opens automatically and quickly drops to the ground where a messenger is waiting to hurry the box to its destination. Thus the fate of a battle is decided.

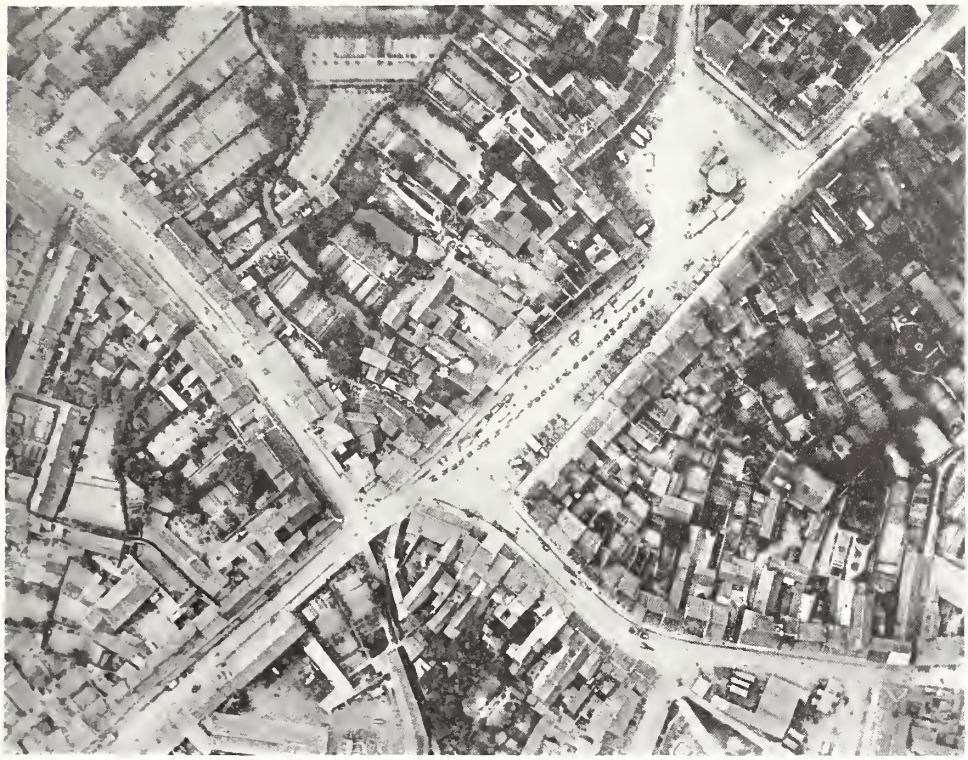
Apart from the map-making value, aërial photography has a strong personal interest to the aviator. It is becoming customary in the service to obliged to concentrate all his attention upon the actual operation of the machine; now he can leave that responsibility to the pilot and devote his time to observation and photography. Or, as it is done frequently, the aviator, alone in the machine, can make a single picture, by manipulating the camera fastened to the side of the plane, by pulling a cord or pressing a button. Indeed, he can expose a number of plates in this manner. The lens is focused at infinity, the height being ten thousand feet or more, and clear pictures are assured. Sometimes the camera is fastened to one of the wings for the sake of overcoming the vibrations of the motor. Many German aviators employ a pistol-grasp camera, like the one taken





THE AËRIAL PHOTOGRAPHER
PISTOL-FORM CAMERA

UNDERWOOD & UNDERWOOD



ST. POL FROM A HEIGHT OF 15,000 FEET KADEL & HERBERT

from a captured enemy plane. This style of camera resembles a Graflex with release extended to the trigger in pistol-form and has been found extremely successful in aërial photography. Virtually, every camera now in use in France is mounted in the fuselage of the machine, and not on the side.

The uninitiated reader, thinking of the aërial apparatus as a small and compact equipment, naturally assumes that plates exposed in the air are of miniature dimensions. On the contrary, the average aërial camera exposes a 5 x 7 plate; 8 x 10 equipments are in frequent use. Although aërial cameras found on captured German machines have been found to be of superb and ingenious mechanism, the lenses of the highest possible efficiency and power—so that they were eagerly copied for the use of allied aviators—it is not too much to say that the opticians of the Allies are making improvements all the time, and that in respect to aërial photographic apparatus they are at least on equal footing with their powerful enemy.

A friend of the writer, who until recently has served as captain of an English Flying Corps, relates the following incident, which illustrates the daring and intrepidity of the English aërial observer. He approached the German lines in his machine for the purpose of obtaining a series of camera-pictures. An officer of his squad flew with him, but kept at a short distance beneath his machine to give warning of the approach of enemy aircraft. Content in the knowledge of having a watchful friend nearby, the observer made exposure after exposure, getting some very important results at an altitude of about 15,000 feet. But, unobserved by him or his vigilant friend below, three enemy-machines, aided by a long strip of cumulous clouds, stealthily approached, but keeping several thousand feet higher up. When directly above our busy aërial camerist, they swooped down upon him, attacking with machine-guns. Taken by surprise, and not knowing what else to do, the Ally aviator descended and steered his plane towards the German lines. In a few minutes, one of his wings was riddled, soon the other became disabled and he dropped into enemy territory. In



SECTOR OF HINDENBURG LINE KADEL & HERBERT

the mean time his friend, seeing the condition of things, beat a hasty retreat and soon reached his base, announcing the destruction of the photographer's machine and its occupant either dead or prisoner. About an hour after the officer had brought the sad tidings, he was called to the telephone and was astounded and gladdened to hear the voice of his friend who declared that he was safe in Allied territory. It seems that, though his machine was seriously injured, he had resorted to a tricky descent, deceiving his opponents into the belief that he had been killed and his machine smashed to bits, and that, about to fall within the German lines, he required no further attention from them, being, as they were, over two miles up at the time. When about one hundred feet from the ground, he managed to right his machine sufficiently to escape into No Man's Land. There he left his wrecked machine, detached the camera with its precious contents and with great difficulty succeeded in reaching the Allied trenches.

Bad Bromides

NEARLY all photographers make bromide prints; a minority make good ones; more make passable ones; and the remainder make poor ones. The worst of it is that those who make the poor ones do not realize how poor they are. One of the greatest factors in the production of bad bromides is the idea that a thin negative is necessary, a thing which has become such an obsession with some workers that they go on making thin negatives and then seek for "contrasty" paper to print them on. This is quite an unsound way to work, for any paper which produces a print in a different scale of tones from the negative is

not so likely to give an accurate rendering of the tones of the original subject. Some sort of a print may be made from almost any kind of negative on bromide paper, but a good plucky but not over-dense negative which will give a good platinum or carbon print will give the best class of print in bromide. Two points necessary to be observed, whatever class of negative is being used, are correct exposure and full development. These ensure a bright print of good color which will give a satisfactory sepia with either sulphide or hypo-alum toning. The usual practice of bromide printers in portrait-studios is to give a long exposure and then to develop for a very short time, often hardly relinquishing their hold of the paper while it is in the solution. Thence it is transferred *without rinsing* to the fixing-bath. Such prints are usually lacking in brilliancy, instead of being a pure black they usually have a rusty tint, and if toned yield the "ginger" hue which disgraces so many show cases. To ensure correct exposure it is only necessary to make a few test-strip exposures ranging, say, from two to thirty-two seconds, from three or four typical negatives and to develop these fully out, or at all events for a fixed time, say two or three minutes. It will then be easy to discover from the strips the correct exposure for each class and to note it on these typical negatives, also noting the exact distance between the light and the printing-frame. There are many self-satisfied printers who would be quite astonished at the improved quality of their output, if they would but work on this system.

Except for very thin negatives it is best to omit bromide of potassium from the amidol developer, which is, in our opinion, the best one for bromide-work. M.Q. has the advantage of durability and it also prevents stained fingers, but it does not yield the pure blacks and grays given by amidol, and prints developed with it do not tone to such good colors as amidol-developed ones do. The greater lasting-power of metol-hydroquinone is in itself a danger, for there is always a risk of using it with occasional strengthening long after it has absorbed an undesirable quantity of bromide from the prints previously made in it. This is indicated by the hardness and greenish color of the prints. Amidol becomes exhausted more quickly and at this stage gives poor rusty-colored prints. Different samples vary considerably in their developing-power, so that it is impossible to say how many prints a given weight of the salt should develop properly. It is false economy to overwork the developer especially at the present price of bromide paper. Except when it is necessary to stop development instantaneously, prints should always be rinsed before fixing. Amateurs and those who develop only a few prints occasionally may perhaps disregard this precaution; but when a large number of prints is made daily and the bath not renewed very frequently, there comes a time when the character of the fixer is changed, and muddy-looking prints result. There is no gray fog such as is caused by exposure to light; but the whites have a dingy tint which is best described by comparing them with the white of an egg which has not quite reached the elec-tion-stage.

Although pyro-soda has been occasionally mentioned as available for the development of bromides, there is one point which has not yet been fully appreciated, and that is its power to produce vigorous prints on ordinary paper from flat, thin negatives. Any ordinary formula may be used; but should contain at least 40 grains of sulphite per ounce of mixed solution. A convenient way to add the extra sulphite is by diluting the concentrated solutions with a 5 per cent solution of sulphite of soda instead of using plain water. Toning-troubles are few with properly made prints; but there is one which must be specially guarded against—namely, imperfect washing before bleaching. A slight trace will cause a general reduction of the image, whereas uneven washing—leaving a considerable quantity of hypo in places where prints have hung together—results in a patchy appearance, some parts almost disappearing, whereas others tone to a good color. Weak sulphide solution is another common cause of bad tones. It has been stated that, given sufficient time to act, a weak solution will answer as well as a stronger one, but that has not been our experience. We have found that even with quite weak prints a good brown tone, not orange, can be obtained with a solution made as strong as the paper will stand without blistering. Of course, there is no accession of strength, but the color is good: on the other hand, a weak solution gives a poor color to even a vigorous print. With regard to the bleaching, we have found the best tones to be obtained by a bleacher which worked rather slowly, taking, say, five minutes to bleach a fairly strong print.

British Journal.



A MERE copier of nature can never produce anything great, can never raise and enlarge the conceptions or warm the heart of the spectator.

SIR JOSHUA REYNOLDS.



William Ludlum

Green Hill and Red

William Ludlum

There is a green hill far away,
Beyond the deep blue sea
Where fragrant blossoms deck the sod
And loved ones wait for me;
Where birds their joyous carols sing
And little children play,
Where peace and happiness abide—
For me—so far away.

There is a green hill far away,
Beyond the deep blue sea
Where fragrant blossoms deck the sod
And loved ones wait for me.
My home is there, my heart is there,
God watches it, I know,
That hill of green, so far away,
The hill that I love so.

There is a red hill, where I stand,
A hill of loathsome mud
Surrounded by a sea of hate
And drenched with human blood,
Where death comes hurtling through the air
And crawling on the sod
And every green thing, crimson stained,
Protests, aloud, to God.

There is a red hill, where I stand,
A hill of loathsome mud
Surrounded by a sea of hate
And drenched with human blood;
But though I long for that green hill,
So far beyond the deep,
Here I shall bide, nor count the cost,
Peace, on that hill, to keep.

EDITORIAL

Increasing the Price of Plates

IN view of the increase of the price of dry-plates—due to the difficulty to obtain the requisite glass, and the revenue-tax—it is interesting to note a similar condition of affairs in England. Our overseas cotemporary, *The Amateur Photographer*, has the following to say on this important subject:

"A further great increase in the price of plates is likely to have a most deterring effect upon amateur-photography; but for the present there is nothing for it but to economize in their use as far as possible, and hope for better things. The most serious feature at the moment is the extreme difficulty to procure adequate supplies of glass. Glass has been going up in price rapidly ever since the overrunning of Belgium deprived us of one of our largest sources of supply; but it is not merely its price which has advanced, it is that it is extremely difficult to purchase it in quantities at all. In the old days, new glass was so cheap that it did not pay to use old glass. Then came a time when old negatives were bought and cleaned off for recoating; and now we find that in the larger sizes, at any rate, plate-makers are stipulating that they must receive from their customers glass equal to seventy-five per cent of the new plates ordered. Thus the purchaser of a gross of 6½ x 8½ plates must send nine dozen same-sized negatives or an equal area of other sizes, before he can be supplied, for which he will be credited. This does not apply to sizes smaller than postcard, so that amateurs are not greatly affected at the moment. But it is an indication of the difficulties which plate-makers have to encounter just now."

Slanting Waterlines

IT is astonishing how many capable and artistic workers neglect the importance of a plumb or level line in their pictures. This was noticeable, particularly, in a recent PHOTO-ERA competition—Shore-Scenes—where a mass of water played a conspicuous part. A large per cent of the seventy-five or more prints entered in this competition showed the waterline as running downhill. The fault was so glaring, that several otherwise satisfactory pictures could not be considered by the jury. This defect was attributed to careless trimming and, in some cases, to not holding the camera level during exposure. Whichever the cause, it is a pity that the serious worker has not thought to cultivate an eye for a truly level or vertical line in a completed print. In any case, the worker need but apply a metal square to the picture—original print or enlargement—and, at least, save himself the embarrassment of having a print returned on account of a fault so eminently easy of correction.

The Invention of Talking-Pictures

IN October, 1909, PHOTO-ERA published a brief description of a process of reproducing simultaneously, by photography, motion-pictures with their accompanying sounds—speech or song—invented by Robert Thorne Haines, F.R.P.S., of Sydney, New South Wales. At the same time, PHOTO-ERA recognized, editorially, the importance of Mr. Haines' invention, and paid a tribute to the skill and perseverance of the man who had given his time, energy and enthusiasm to the development of a method the importance of which he anticipated long before it began to attract the attention of others.

Although PHOTO-ERA is not interested in controversial matters—even those of a photographic nature—it is ready and glad to help obtain recognition in behalf of inventors who have been deprived unjustly of the fruits of their honest and successful labors. As the Autochrome was the realization of the hopes and aims of photographic experimenters for more than half a century, so is the synchronized functioning of the phonograph and the kinematograph—perfect unison of sounds and images—the result of similarly tireless efforts. An interested public has been eagerly anticipating such an invention ever since it was impressed by the first demonstration of Edison's talking-machine.

In justice to Mr. Haines' claims in this important field of invention, we print elsewhere in our present issue the letter addressed to us by Mr. Haines. We are confident that all fair-minded readers of what we have published on this subject will accord the gentleman honor and recognition of his inventive skill and sympathy—if not practical support—in the unfair treatment that he has experienced. We have always considered Mr. Haines a man of personal integrity and honest intentions.

ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, or artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Shore-Scenes Competition
Closed August 31, 1918

First Prize: W. C. Sawyer.
Second Prize: Franklin I. Jordan.
Third Prize: H. L. Bradley.
Honorable Mention: Ross W. Baker; Emily A. Corning; Nelson Antrim Crawford; Bertran F. Hawley; J. B. Herrick; Chas. A. Hughes; F. W. G. Moebus; George P. Russell; J. Herbert Saunders; Kenneth D. Smith; S. E. Solomon; James Thomson.

Subjects for Competition—1918

"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"**Indoor-Genres.**" Closes December 31.

1919

"The Spirit of Christmas." Closes January 31.
"Still-Life." Closes February 28.
"The Spirit of Winter." Closes March 31.
"Rainy-Day Pictures." Closes April 30.
"Miscellaneous." Closes May 31.
"The Spirit of Spring." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.



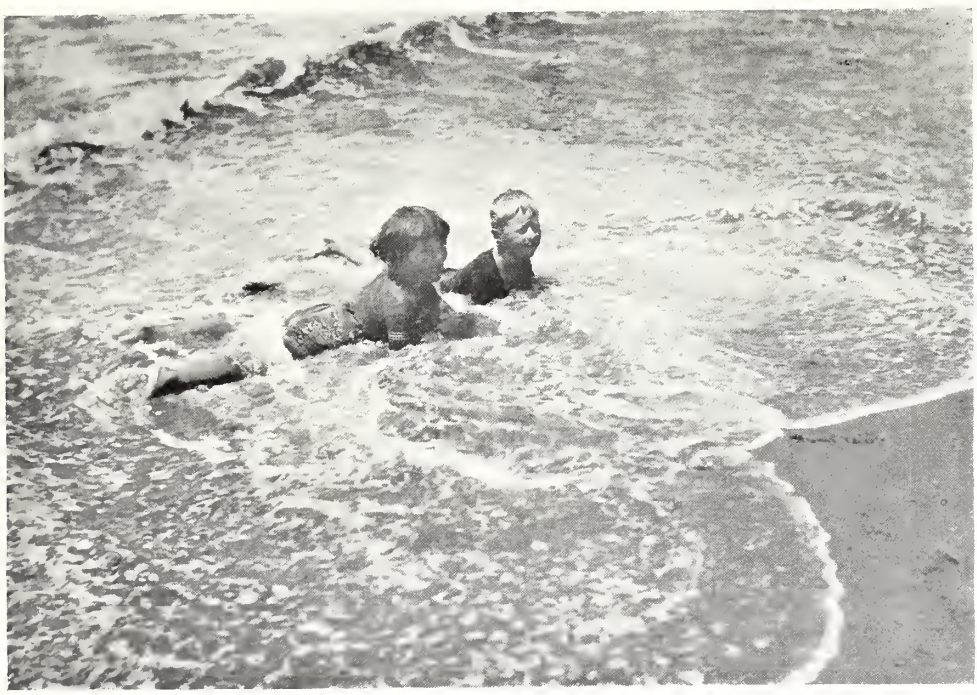
Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

A Cause of Blurred Image

PHOTOGRAPHERS occasionally encounter trouble in the shape of a blurred image, from motion of the apparatus during exposure, especially when using a long-focus instrument with bellows fully extended. An investigation on the part of the writer, some time ago, developed the fact that the causative jar is often produced by the action of the shutter-mechanism *in the act of closing.*

McMORRIS HOUSTON, M.D.



FUN IN THE SURF — W. C. SAWYER

FIRST PRIZE—SHORE-SCENES

Advanced Competition—Indoor-Genres Closes December 31, 1918

During the fall and winter, there are innumerable opportunities to obtain delightful indoor-genres of friends, family and home. It will be remembered that the competition devoted to outdoor-genres laid particular emphasis on the portrayal of the subject true to the life. That is, if a farmer was depicted hoeing corn, he was purposely or innocently oblivious to the camera; moreover, he wore overalls and a flannel shirt instead of a Prince Albert and top-hat. I have resorted to hyperbole to drive home the important point that indoor-genres must be simple, natural and true to the life of the subject. For example, do not spoil an otherwise excellent study of an eight-year-old youngster reading quietly by portraying him apparently deeply engrossed in Emerson's essays on transcendentalism, according to the title of the book, which is plainly legible. Make every detail hang together logically. A good motion-picture is an excellent example of the infinite pains taken to maintain consistency throughout the play. One does not see the hero sit down and light a fresh cigar in one scene and reappear in the very next one in the same position smoking a corncob pipe. In short, if in the last scene he was smoking a fresh cigar, he must still be smoking the same cigar in the new scene of the same interior, otherwise the entire effect falls flat. If a picture of mother is to be made as she sits by the table in the living-room, do not depict her as reading when, as a matter of fact, she is more often busily darning stockings. Be faithful to fact; and, in so doing, an indoor-genre of technical and artistic merit is bound to result. It will ring true, and it will find favor for that very reason.

In making indoor-genres, daylight, artificial light and flashlight-apparatus may be used. However, the cheapest illuminants at present are daylight and gas or electric light. A cloudy bright Sunday is particularly good for indoor-genre photography. There being no sun to cast heavy shadows or annoy the subject by its brilliancy, the camerist may work with comparative freedom. He will need virtually no diffusing-screens; and a sheet placed judiciously to reflect the light where it is needed will about complete the necessary preparations. Of course, care must be taken to expose correctly and to use the plate or film best adapted to this sort of work. This remark applies as well to indoor-genres made by artificial light. A nitrogen-filled electric-lamp will produce a strong actinic light that will enable the worker to obtain excellent results at night. However, owing to the very intensity of this illumination various forms of light-diffusion must be evolved in order to avoid extremely harsh contrasts and unpleasing facial expressions. Care should also be taken to make sure that the wiring of the house and the service electric current will permit such a powerful lamp to be used without danger of blowing out the fuses and otherwise injuring the wiring in the house. In most cases, the use of a nitrogen-filled electric lamp will cause no trouble and it is by far the most effective illuminant since there is no noise,



SYLVIA — FOSTER LARDNER

INDOOR-GENRE

smoke or dust. Two or more of these nitrogen-filled lamps—they may be obtained up to 1,000 candle-power, I believe—would answer all requirements. Then, we have several types of electric home-portrait lamps which use a special type of carbon in an arc and these give out an intense though comparatively soft actinic light. Obviously, these outfits are more expensive than the nitrogen-filled electric lamps; but if the camerist can afford one of these outfits he should be able to produce excellent results. Even old-fashioned gas with the aid of the modern gas-mantle affords enough actinic light to enable the camerist to make indoor-genres. Of course, the use of gas does not give the worker as much opportunity to place his illumination where it will do the most good. However, a little originality will work wonders, and even a gas reading-lamp may be made to serve admirably. The use of flashlight-apparatus is rather curtailed at the present time owing to restrictions, taxes and increased cost. However, those who have the necessary equipment and can obtain supplies can use their flashlight-apparatus to advantage. The modern flash-bag virtually does away with the smoke nuisance and, at the same time, so muffles the noise of the explosion that the subject is not perturbed in the least.

There is virtually no limit to suitable subjects. The times in which we live abound in possibilities. A moment's thought will enable the camerist to select any one of the many home-activities resulting directly from the war. Then, there remain the many incidents of family-life that we have known and loved for years. Although I have emphasized indoor-genres made in the home, there is no reason why one could not be made in a store, office or factory. Certainly, a well-composed picture of a girl munition-worker at her bench or of a workman inspecting gas-masks would be an indoor-genre of artistic and permanent value. Likewise, members of a Liberty Loan or other committee hard at work would make an interesting subject.

Perhaps, no subject has a greater appeal than a picture of a soldier or sailor who is home on his last furlough before leaving for overseas-duty. Properly handled, such an indoor-genre could be made a masterpiece. Again, the soldier or sailor invalided home from the front would make a stirring subject. With his service and wound-stripes in evidence and his serious eyes that have seen war in all its frightfulness, he would make a subject of universal appeal. Then, there is the convalescent soldier or sailor who chafes at his confinement and who is eager to return to the front; he, too, displays that indomitable spirit that permeates the American forces on land and sea. However, nothing will ruin such indoor-genres more quickly than a show of self-consciousness on the part of the subject. Either have it right in every detail or avoid the subject entirely.

Of perennial interest are baby-pictures. They are always of surpassing interest and unsurpassed difficulty to make. Why it is that doting mothers insist upon clothing their little darlings in a mass of white lace and frills when they are to be photographed, is one of the unanswerable riddles. Not only do they dress them up in all manner of finery, but they insist that baby be placed in the center of another white expanse such as a large pillow, white-lined basket or crib. It is virtually impossible to photograph a baby's white dress and obtain detail and softness and at the same time obtain a pleasing picture of baby's face. The dress requires a longer exposure than baby's face and obviously baby cannot be controlled long enough to permit the proper exposure for both dress and face to be made. The problem would be greatly simplified if mothers could forego the wonderful infant dress-creations in favor of a truly delightful picture of baby's



ON PATROL — FRANKLIN I. JORDAN

SECOND PRIZE—SHORE-SCENES

laugh or smile. In one sense it is just as absurd to dress up baby for an indoor-genre as it would be to show mother preserving pickles clad in her evening-dress. Such pictures do not ring true. "Photograph your subjects as you find them," is a good rule for the genre-photographer to follow, if he would succeed.

The activities of the Red Cross, Y. M. C. A., K. of C., Salvation Army and other organizations offer much excellent material. Remember that in an indoor-genre but a part may be shown. It is for the camerist to select his subject so that it will convey more than is apparent at first glance. If it happens to be a girl in Red Cross uniform busily at work making bandages, try to make the beholder see beyond this *one* girl to the thousands of girls and women who are working in every part of this great country. Nearly every good picture of a soldier or sailor causes me to visualize the thousands now in active service. The Liberty Loan committees have used this human ability of visualization to the utmost in their posters and their newspaper publicity. Most of the illustrations are filled with a "punch" that appeals to every red-blooded American. Something of the same force must make itself felt in the indoor-genres if they are to meet requirements.

In seeking subjects for this competition, it would not be fair to our pets to neglect them. There is no reason why a dog or cat or other pet should not make a good indoor-genre. Even if they could not be used as the main subject they might be used to great advantage as part of the general theme. For example, if grandmother was depicted as knitting before the fire, nothing would add more to the appeal of the picture than a dog or a cat curled up at her feet. No doubt the camerist could devise other ways to use available pets in making indoor-genres. However, whenever pets are employed they should conform to the general rule that there must be no posing. If the dog will not lie down naturally in the spot where he is wanted to complete the picture, leave him out or change to a place in the room where he will lie down and look thoroughly at ease and comfortable. In no circumstances force the issue; he will show the effects of any forcing and thus spoil the harmony of the composition.

An indoor-genre offers greater difficulties than one made out-of-doors; but then the satisfaction of successful accomplishment is greater. The field is virtually unlimited, for it not only includes the immediate circle of our friends, family and home, but the many



THE SENTINEL — H. L. BRADLEY

new activities brought on directly or indirectly by the war. There is an opportunity to perpetuate much in our present lives that will be cherished eagerly in the years to come. Think of how the Civil War would have come home to us if cameras had been in use then as they are to-day. Even the Spanish-American War failed to produce anything like the pictorial record that is being made of the present war. Every individual effort counts; and when taken in the aggregate, these individual efforts will form a priceless pictorial history of the home-life of this country during the great war for democracy. From every point of view, indoor-genres are eminently worth while, and they merit the best effort of every entrant in this competition.

A. H. B.

Notice to Librarians

Many librarians and subscribers, desiring to bind the first volume of the year of Photo-Era, and not finding the index for same in the June issue, as formerly, do not seem to be aware that since 1910 the index for the entire year—two volumes of six issues each—has been, and is now, published exclusively in the December issue of each year.

Buckled Films

It has been stated that pressing a buckled film with a warm iron will flatten it. If we had any films which we valued we should certainly hesitate before exposing to such treatment, but if you have one of no particular importance you might try what a warm flat-iron (not very hot) would do. A reader has also suggested the following plan recently, and it appears very feasible. The film is attached (face upwards) by the edges to a sheet of glass: an old cleaned glass-negative larger than the film will do. Use an edging of celoidine, taking care that none gets on the surface of the film. After this has dried on the glass, cut a mask of stiff paper with an opening smaller than the film. Celoidine this and adjust carefully so that the edges of the negative are covered with the mask. When dry, mop over the surface of the film with a wad of cotton and clean water. The film will now dry flat and taut as a drumhead and remain so, and can be subsequently removed from the glass support, or, if necessary, it can remain attached and be used as a glass-negative. The object of the mask is to prevent the water getting under the film, the gelatine side of which would stick to the glass.

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY

Treating a Broken Negative

Photo-Era has recommended several simple methods to print successfully from a cracked or broken negative; but the one suggested by *Photography* is also excellent. It is to make an enlargement of the injured negative on a smooth or glossy paper, arranging the illumination so that the break is as inconspicuous as possible. The enlargement is then worked up carefully with pencil, stump or watercolor, until the damage is virtually invisible, because the next operation will make it still less noticeable. That operation is the making of a fresh negative of the original size once more. When this has been done, but not until then, do we advocate any further handling of the broken original, which, more often than not, ends in putting it past all repair.

Paper for Exposure-Meters

Enquiries which reach us from time to time show that there are workers who endeavor to provide their own sensitive paper for use in the exposure-meter, either by treating one of the commercial forms of paper made for printing from negatives, or by making the paper throughout. In either case, unless it is quite impossible to buy the regular product made by the maker of the meter, it is a mistake to attempt to use anything else. Not only have we no means of knowing how the speed of the home-prepared paper compares with that for which the meter is constructed; but the darkening of such papers is apt to be irregular, depending upon slight differences over which it is difficult to exercise any control. There is also the question of matching the color with that of the standard tint. While there are many things which the worker with a little dexterity and patience can make for himself, as good as he can buy; we are of the firm opinion that meter-paper is not one of them, particularly in view of the small cost of an adequate supply even at the present time.—*A. P. and P.*

The Mirror of the Reflex

It is usual, as our readers know, for the mirror of the reflex camera to be silvered on the face instead of on the back of the glass, to avoid double reflection. The consequence is that such mirrors are very apt to tarnish, as they have no glass to protect the reflecting-surface. A thin film of lacquer, of a collodion character, is often used: but this only retards, and does not actually prevent, tarnishing. When the mirror is greatly discolored, it becomes difficult to see the image properly, and it becomes necessary to resilver the glass—a task requiring some deftness. It is usual to send the camera to the maker for this purpose: but at the present time makers are too busy on work of national importance, and such renewals are not welcomed. We do not advise the amateur to attempt to resilver the mirror, or to repolish it: as such operations are likely to result in its last state being worse than its first. It is better to put up with its reflections such as they are, though feeble, and make the best of it for the time.—*The Amateur Photographer.*

Developing at Room Temperature

Mr. W. B. Ferguson put in a plea for development always at the temperature of the room, so that no trouble from alteration of temperature in the course of development need arise. This simply necessitates a time-and-temperature table. Thus, if the temperature was 75°, one developed for a certain time; if 65°, for a longer time; if 55°, for still longer. Such tables are issued by the manufacturers, though with a rather wide interval of 10° or so separating the calculations: but it is easy to plot out a diagram showing the length of development at intermediate temperatures. Mr. Ferguson said that by means of a properly constructed table he had been able to develop with pyro-soda at 5° above freezing-point, and in spite of the very low temperature, which would have put some developing-agents quite out of action, he had got good results.—*A. P. and P.*

Carrying Wet Prints

If for any purpose a wet print has to be carried for some distance or sent through the post, it can be done quite safely if it can be prevented from drying and the gelatine prevented from decomposing, states *Photography*. The latter is effected simply. A bath of one part of formaline to nine parts of water applied for a minute or two is sufficient protection. The print or prints can then be rolled up, some paper wetted (in the formaline-bath, for choice) rolled around them, and then waxed or other waterproof paper put outside, to delay evaporation and to keep the moisture from any other articles with which they may come into contact. No time should be lost to give them a rinse and to put them up to dry when they arrive at their destination: but that is all that need be done.

Enlarging with a Camera

Daylight-enlarging is very extensively practiced by amateurs to-day; but to judge from what we hear and see, almost entirely by means of the little enlargers, usually of fixed focus, which can be carried out and stood on end. Where a room can be darkened temporarily there is much to be said in favor of using the camera itself. The method of doing so is quite simple. A hole is cut in the screen which blocks the window, and in this the negative is fitted. The camera with its focusing-screen removed is fixed up against it, the lens pointing into the room, and the image is focused on an easel a little way from the lens. A reflector of white cardboard fixed outside the window at an angle of 45° completes the arrangement. A camera with double extension is to be preferred for the work, as it makes it easier to enlarge slightly: but if the camera is not pushed up too closely to the negative, the intervening gap being filled up with a focusing cloth, the extra extension needed can be got in that way. Or a portrait magnifier can be used for the same purpose. The advantages of the method are that it allows enlargement to any size the easel will take; it also lends itself to any manipulation during exposure, such as local shading, which is not easily done at all with a fixed-focus enlarger.—*A. P. and P.*

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value, $2.50.
Second Prize: Value, $1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous";*** but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than one year's practical camera-activity, and without any practical help from friend or professional expert. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4}$ x $3\frac{3}{4}$ to and including $3\frac{1}{4}$ x $5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition
Closed August 31, 1918

First Prize: Ethel Dismukes.
Second Prize: E. H. Smith.
Hon. Mention: Carl G. Brown; Belle McGilchrist.

Change in the Beginners' Competition

THE Publisher is fully aware that the character of this competition calls for a change. By having permitted workers to enter prints here that have never been in a competition elsewhere, he has given a generous scope and wide interest to this competition, which appears to have won general approval, judging by the number of participants. Of late, however, the pictorial standard of contributions to this competition has been of a very high order—so much so, indeed, that real beginners have been crowded out.

In future, this competition will be limited to actual beginners, but not to those who have been using their cameras only a few weeks. Competitors must have had some really practical experience in pictorial selection, developing and printing. Those who make only the exposures, entrusting the photo-finishing to others—friends or professional experts—are not eligible; neither are workers of over one year's camera-activity. Past and future participants who have won a first prize in the Beginners' Competition automatically drop out, but may enter the Competition for Advanced Workers. The three prizes, offered in the Beginners' Competition, will be continued as heretofore.

Igniting Flashpowder

AN electrical arrangement for igniting flashpowder can be made very easily, with materials which are readily procurable. The powder itself is ignited on a block of hard wood, upon which are screwed down two lengths of clock-spring. These are in a line, with their adjacent ends about a quarter of an inch or less apart. Under these ends is slipped a bit of the finest iron wire procurable, such wire as is used for binding flowers. The springs are connected up with a push or switch, with the requisite length of flexible wire, and a dry battery such as is used in the pocket-torches now to be found everywhere almost. Over the fine wire which connects up the two springs is heaped the flash-powder; and on pressing the push, the current heats the fine wire red hot and ignites the powder at once. Instead of the springs, a couple of screws may be driven into the wood and connected up, the wire being wound around one and then carried across to the other; but the springs take less of the fine wire, and a fresh piece is usually but not invariably wanted for each flash. The whole thing can be fixed up in about half an hour. I use a solid block of oak about 4 x 3 x 6 inches, as this is heavy enough to stay where it is put, against the drag of the wires; the flashes have charred its surface a little, but have not otherwise affected it. It cannot be protected with metal as this would shortcircuit the current.—*A. P. and P.*

FIRST PRIZE
BEGINNERS' COMPETITION



"IN DIXIE-LAND" ETHEL DISMUKES

Seeing is Believing

WHETHER it is human nature or psychology, I am unable to say; but the fact remains that we listen to many a good lecture or read many a fine book without sensing the vital basic principles involved. If the lecture or the book is illustrated—ah, that changes our grasp of the subject. The most beautiful description in the world can never make us appreciate the simple architectural grandeur of the cathedrals of France—many of which the Germans have reduced to ruins. However, give us a picture and the description, too, and we have the thing complete. In short, we then possess a visual and mental conception of every detail of construction and bit of architectural beauty.

It is not my habit to "advertise" anything in this department, particularly if the article is sold exclusively by PHOTO-ERA. Nevertheless, I really feel impelled to cast precedent to the winds and to make an exception in the case of, "Why my Photographs are Bad," by Charles M. Taylor, Jr. Really, I am amazed that more beginners and readers of PHOTO-ERA have not obtained this book. If this little volume did not contain two pages of reading-matter it would be worth its cost because of the illustrations. They have "punch." By that I mean that each one seems to say "This is the sort of picture you'll get if you don't follow instructions and neglect to profit by studying good photographic text-books and photo-magazines." In other words, virtually every illustration is a reproduction of a photograph made purposely to show the mistakes that nearly every beginner seems bound to make. I might write columns in the attempt to show the importance of holding the camera level, but without clearly impressing on the reader's mind just what happens if he does not. However, one glance at a picture of a house leaning grotesquely on its side will drive the admonition home with a "punch." That is why I feel it necessary to repeat that the illustrations alone in "Why my Photographs are Bad" are worth the price of the book.

In connection with the illustrations, there is another point worth noting. All the photographs are *not* glaring examples of beginners' work. In fact, there

are some excellent examples of technically perfect pictures which are of value to any novice for study and emulation. I know of no book that excels Mr. Taylor's in photographs that teach the fundamentals clearly and authoritatively. Although there are many excellent photographic text-books, I know of none that devote much attention to that period in the beginner's photographic experience when every finger is a thumb and nothing seems to work out right.

There are no lengthy, dry discussions of this or that principle or process. In fact, most of the text-matter merely introduces an illustration, and with that, the point is clinched. Mr. Taylor's book does not aim to include every possible error, nor does it aspire to be a photographic text-book. It was written to help the beginner at the time when, with a new camera in his hand, he did not know what to do with it or how to begin to make *good* pictures. For this, and other reasons mentioned, I have taken time and space to call the attention of beginners to that which I firmly believe will help them. Seeing is believing, particularly in mastering photography; and "Why my Photographs are Bad" will make those who see believe that real picture-making requires more than the ability to "press the button and let the corner drug-store do the rest."

Inasmuch as we are on the subject of books and reading, let me call attention to the admirable results that may be obtained from a carefully planned course of photographic reading during the winter. By that I do not mean a laborious effort to wade through dry-as-dust volumes of facts and figures, but rather the selection of some good travel-books that are illustrated by the author who is likewise a good photographer. In connection with such books there should be some time devoted to the mastery of the practical principles that come into use every time that a picture is made. There are several excellent and authoritative books, written in a non-technical manner, that would not prove too much for the photographic digestive powers of the beginner. Up-to-the-minute professional men are voracious readers. Why? Not because they have the time, but because they must keep pace with what "the other fellow" is doing, to avoid being side-tracked and considered "behind the times."

One of the advantages to the beginner of photographic reading is that he has the opportunity to get an idea of what he is "up against." He may be very enthusiastic when he starts out; but as he gets deeper into the subject he may decide—fortunately for himself and others—that golf or tennis will afford him more pleasure than photography. On the other hand, the beginner, as he proceeds, may become more and more interested in the remarkable history and development of photography. His very nature may long to work out the problems of exposure, development and printing. To him, there is no limit to his photographic ambitions. The more difficult the process may be, the more eager he is to master it. Unless all signs fail, such a beginner will make a success of photography from the outset, and thorough, intelligent reading will be of increasing value to him as he proceeds.

At various times, when I have insisted that photographic magazines were of inestimable value to amateur and professional photographers—despite the existence of a comprehensive library of photographic text-books—I have been obliged to point out parallel cases to convince my readers of the truth of my statement. Probably, no country has a finer list of medical books than the United States. Why, then, does every reputable physician subscribe to two or more medical journals? Our books on law are among the best. Why do lawyers subscribe to periodicals devoted to the legal profession? Again, we lead the world in the manufacture of motor-cars. No nation has a more extensive library of books on automobile-engineering. Why are so many magazines devoted to motor-cars? One answer does for all. Progressive men and women in any line of human endeavor realize *the vital importance of keeping up-to-date.* One month may see epoch-making changes in any profession or industry. Obviously, such changes cannot be included in the finest and latest text-books that are written. Books would never be published if authors waited for the "very latest developments," because new developments are occurring every day that should be included if it were possible to do so. In short, photographic text-books are the very backbone of the science; but the photographic magazines are the sensitive antennæ that catch each new development and transmit it without delay to the camerist that he may know and improve or follow the work of the acknowledged leaders.

In conclusion, let me repeat that the winter-months offer limitless possibilities for the beginner to get settled mentally with regard to photography. From the practical experience he may have had during the summer, he should be in a position—in connection with his reading—to decide whether or not he is "in the game to stay" to the end of the last inning. In any event, his reading of travel-books, photographic text-books and photo-magazines can do him no harm, and it may result in such an increase of knowledge and interest that the beginner will produce results that are a credit to himself and a pleasure to all.

A. H. B.

Absorbing Vibration

There are certain branches of photographic work in which vibration may work havoc. The process-worker adopts an elaborate series of precautions against it, and the photomicrographer and the copyist may both find it necessary to take steps to neutralize tremors if their work has to be done in a city or near a railway-line. The motor 'bus has made such work impossible in some previously quiet city-streets; and one photographer of our acquaintance has been compelled to resort to a swinging table for lantern-slide-making by reduction on this account. The means he has adopted may be worth mention for the guidance of others. A long work-bench carries the camera and original in the usual way; but this bench, instead of being supported from beneath on four legs, is slung from above, by two loops of rope which pass around the ends of the bench and around a bar which is fixed from side to side of the room, parallel with the bench. The ropes are not mere continuous rings, but in each side have had inserted four strands of strong elastic rubber. These act as springs, and absorb any slight tremor, which otherwise might do mischief.

Photography.

Slow and Fast Plates

Many photographers in their choice of a plate seem to be governed by the idea that speed is the chief characteristic to aim for. There are, however, many examples to be seen in the way of enlargements exhibited in professional show-cases, that go far to prove that a fine-grain plate is far more suitable, when enlarging is contemplated, than one of the ultra-speedy grades. Whatever the makers may say, extreme speed and

SECOND PRIZE
BEGINNERS' COMPETITION



THE STORY-HOUR — E. H. SMITH

ultra-fine grain can never go together to the extent that the latter quality is found in the slow, or ordinary, plate, and I am sure that many operators do not know the value of these slower emulsions, for much of the general work that they are called upon to carry out. In an enlargement, grain is most objectionable, and requires a lot of hand-work to remove, and much of this could be avoided if operators looked with more favor on the slower plate. For indoor-work the exposures are not too long for the average adult sitter to keep still, but it is in out-of-door work, groups, etc., that the slow plate is found at its best. Its powers of rendering detail, and contrast, are far in advance of the ultra-fast emulsion, and the resulting prints are undoubtedly finer. Even on the ground of rapidity it is not always the fast plate that scores, for on one occasion we were led to make an experiment.

Two plates (one 500 H. and D., and the other 200) were taken, and each given an exposure of 1-100 S, on a dull December afternoon, the stop in use being F/8. Consequently, both negatives were much underexposed. The fast plate, which it was known would stand but little forcing during development, was dealt with by the Watkins' method of time and temperature, whereas the slower one was forced in a double-strength solution warmed to 75° F. When comparing the resulting negatives, we were surprised to find that the slower plate actually had the more density and detail, and was no more "grainy" than the other. The use of a slow plate also tends towards the comfort of the operator, a brighter light may be employed in the darkroom without risk of fog; whereas during development, whatever system be employed, a saving of time is effected. Slow plates invariably give a better rendering of colors, probably because the secret of success when using them is in giving a generous exposure, whereas if an ultra-rapid plate was employed, we should probably give the minimum, and a full exposure enables these colors to impress themselves more fully upon the emulsion. It is certain that if given a full exposure and not overdeveloped, the slow plate is as fine a negative medium as any operator could desire; yet we met a photographer recently who confessed that he had never used them, and we believe that if the claims of the slow plate were more widely realized outside its own especial field—*i.e.*, copying, process-work, etc., it would be much more widely utilized.—*British Journal.*

ANSWERS TO QUERIES

Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.*

O. L. B.—**According to** *The British Paper Trade Journal* **the stock of the best photographic paper** consists of pure rag, which should be free of iron and have an ash content not exceeding four per cent. The breaking-strength of good stock averages 2,400 inches, the strength being about 2.4 per cent. The dilation on moistening should be small, while it is necessary that the paper have a uniform appearance both by transmitted and reflected light. Premature yellowing may be traced to the use of decomposed animal sizing, inferior stock or the action of iron in combination with resinic acid.

J. S. C.—**Whether 3¼ x 5½ or 4 x 5 is the better size camera** is very largely a matter of personal opinion, although the nature of the subjects which it is used to portray and even the character of the country, if landscape is the aim, have a distinct bearing. The criticism of distortion in postcard-size is unusual and this may be seeming and not actual, due to an excess of foreground in some instances. Certainly a 6½-inch lens ought not to cause distortion on a 5½-inch film.

Although 5 x 7 is very near the ideal proportions most favored by artists, 4 x 5 has ever been an exceedingly popular size; perhaps the most popular. The shape must suit the subject, however, and the owner of a 4 x 5 finds himself oftener trimming from the side, and of a postcard-camera from the end. The camera you mention will surely please you if you think it worth the monetary sacrifice to make the change.

You are right in assuming that a 5 x 7 lens used on a 4 x 5 plate would constitute a narrow-angle lens for that plate. The advantage lies in more nearly correct perspective, corresponding to what the eyes see without moving in their sockets.

F. C. B.—**The spots or streaks on your negative** may be due to one of several causes, which perhaps you will recognize as they are alluded to. Such a regular crop of spots of various irregular shapes in rather close formation over a considerable area are often due to stale developer. The stock-solutions may have deteriorated with age, the mixed solution may have stood too long before use, or, as in an instance like this, where the negative in question is the only one of several developed in the same developer, it may have been the last of too large a number to be developed at one time.

If, however, as you state, all of the plates were developed at the same time, presumably in a tank, this regular unevenness or ripple formation resembling crocodile leather is probably due to failure to keep the solution of uniform density and somewhat in motion during development, by shaking the tank, stirring its contents or reversing a liquid-tight tank end for end at frequent intervals. Pyro, pyro-metol and metol-hydroquinone are the developers most likely to give offense in this respect.

Incomplete fixing, the result of taking the plate from the bath too soon, or of a greatly exhausted or very cold bath, may be the cause. If the fault lies in fixing, there will be brown stains eventually.

C. K. O.—**Most shutters may vary in speed if turned on their sides or inverted.** This possibility should not be overlooked, particularly when engaged in making important pictures. The variation may not be very great, and probably in most cases the camerist would experience no trouble. If roller-blind or focal-plane shutters are being used it is well to make sure that the tension-spring has been tightened sufficiently to close the shutter—no matter in what position it may be held.

J. H.—**Development of negatives by the glass positive methods.** Make your glass positive by contact, as you would a lantern-slide or window-transparency, and from that make as many negatives as you wish. If you wish to make enlarged negatives, first make an enlarged positive in the enlarging camera by any of the light-sources that are popular and effective. Many professionals make these enlarged positives by direct daylight—a very simple matter—and from these enlarged positives make contact negatives.

J. S.—**Drying unwashed negatives and prints after fixing** is not to be recommended, unless this is done in a darkened room. Without going deeply into the chemistry of the matter, we should say that plates or prints that have been fixed but have not been properly washed should not be exposed to bright light to dry and, after a lapse of many hours, thoroughly wash them in the hope of removing every trace of hypo.

The way is to proceed as advised and then to wash them for many hours, as long as they need ordinary light.

Our suggestion would be to dry them in a darkened room and afterwards wash them thoroughly in ordinary light; because hypo, remaining in the film, will be acted upon by bright light and affect the print or negative, more or less.

F. J. K.—**We regret not to know of what Hypono is composed,** but it is undoubtedly one of the Peroxides, although not H_2O_2. It has no bad effect on the film, except when used too strong with soft water when it has a tendency to soften the film. This is remedied by using it at half strength.

N. T. B.—**The Goerz Dogmar F/4.5 lens will meet your requirements satisfactorily if your camera has sufficient bellows extension.** You will be able to utilize the three-focus advantage; namely, the complete lens, the front combination and the back combination. By writing to the C. P. Goerz American Optical Company, 317 East 34th Street, New York City, you will obtain complete data as to the exact focal lengths of the various combinations. Without reserve, we can state that the lens, for the purpose you intend to use it, will meet every test.

F. E. C.—**Great shutter-speed is not required in snapshot picture-making.** Most shutters having speeds of 1/25, 1/50 and 1/100 of a second will answer admirably. It is of advantage, however, to have a shutter that gives speeds of 1, ½, 1/5, 1/10, 1/25, 1/50, 1/100 and 1/200 of a second, especially in connection with an anastigmat lens. The focal-plane shutter, although very efficient for slow and high-speed exposures, is not essential to ordinary snapshot-photography. Before deciding upon a shutter, it is best to consider carefully the sort of pictures one expects to make and then to purchase a shutter suited to the work in hand. In no circumstances use oil or vaseline in an attempt to make a sticky shutter-valve work easily. A lubricant of any kind will cause the valve to collect dust and become badly gummed-up. The best way is to have the inside and outside of the piston buffed by a reliable camera repair-man. To attempt to do this work oneself may be disastrous.

PRINT-CRITICISM

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.*

K. M.—Your picture of two children in the woods picking what appears to be spring-flowers, has all the appearances of spontaneity and childish ingenuousness. The little models were evidently not chosen or prepared for the part they were to play in this pretty scene for the nearer child—a boy—has on a black cap and his little sister behind him has on a white straw-hat. It might have been better if the order had been reversed. The grouping shows good judgment. The two models forming an oblique line running toward the middle of the picture. The setting is spring-like and convincing and with its multitude of white flowers and a background of numerous slender tree-trunks, natural and appropriate. The tone throughout is truthful and harmonious, and the definition, slightly diffused, resulting in a pleasing degree of atmosphere.

W. E. C.—Your spring-picture of a little girl in a white smock and white hair-ribbon, holding a young bird in her right hand, represents an attitude of childish interest. The head of the little model is hanging over too much and mars what otherwise might be an appropriately graceful attitude. The figure suffers from being posed and is, therefore, a trifle stiff and unnatural. The whole tone of the figure in a white costume, white socks and dark sandals, is excellent, and little fault can be found with the general technique except the extreme white mass due to the full sunlight falling upon it and what might be mistaken for snow; but, in reality, is a pebbled ground. The background—about ten feet distant from the figure—shows that the camera was not held level, as the lines are somewhat out of plumb.

H. J. W.—Your subject "Japanese Water-Lilies" is a striking composition, well arranged, but the subject would have been far more convincing if the water in which they grow were apparent.

"Autumn" appears to be enlarged, with a loss of detail and gradation, the nearest tree being decidedly out of focus and the effect of the light exceedingly peculiar. Two prominent trees when of almost equal importance might be expected to frame a distant vista of considerable interest, but as this is wanting the subject lacks unity. The heterogeneous foreground, due to the usual concomitant of camp-life in the woods, could have been managed with better result had a little care been taken.

M. H. S.—Your winter scene, I am sorry to say, does not suggest the title. It is very flat, dull and monotonous throughout. A snow-scene should be somewhat brilliant, with due regard for the deep shadows. In your picture you have three snow-covered spruce trees in a horizontal row, which does not suggest good pictorial composition.

K. D. S.—The figure of the man at the edge of a pond, tending a wood-fire, is placed exactly in the center of the picture-space, dividing, at one side, the lake with its spotty mass of black and white, and at the right the brightly lighted shore. The background of woods is picturesque, and it is likely that a different viewpoint would have yielded a pleasing pictorial result.

A. S. R.—Your picture of a little girl dressed in white and carrying a huge black muff in front of her could be worked up into an artistic result, but it requires much technical skill. The muff is altogether too black and can be lightened in tone. The face of the child is altogether too dark, unless, indeed, the tone is absolutely correct. The objects composing the background are obscure and distorted.

M. K.—Your landscape with cow lying in field is a promising artistic theme, but has been badly managed. The light appears to be wrong, the exposure too brief, and the composition, stiffly symmetrical, results in large masses of patchy white, and a vast number of white spots compose the foliage. The light from a different direction, either right or left, instead of overhead, and a full-exposure, with different viewpoint, would have resulted in a pleasing picture of this interesting subject.

C. K. W.—Your near landscape is out of focus and out of drawing, the foliage reminding one of spots of a leopard. The poor cow looks very unhappy. How could she be otherwise? She is caricature by being out of drawing and could easily be mistaken for some other kind of animal. An attempt to produce an ultra-artistic result by putting everything out of focus, is not the way to proceed. The intelligent and rational use of a soft-focus lens would be better.

A. S. U.—Your portrait, "Constance," is a highly creditable composition; but it lacks true color-values. The complexion of the child's face, neck, hands and arms is consistently correct, but the dress is obtrusively inharmonious on account of its extreme whiteness. The book is also extremely white and without character, as it does not suggest either a printed or a pictured page. The child should have worn a medium-light costume, stockings as well, and the book should have contained pages of paper not extremely white, and lighted so as to not offend by its obtrusiveness. A child dressed in white is, in itself, an apparition of loveliness. It could be treated by a painter so that the face would dominate even the white dress; but in photography the thing cannot be done so satisfactorily.

E. S. B.—Your sunset picture is very attractive, but it is greatly marred by the heavy mass of unsupported branches at the right. Had the camera been turned a trifle more in that direction, so as to include the tree-trunk, this would have been a very good picture.

E. P.—The only criticism of this well-composed landscape is the lack of definition in the foreground. The distance is more sharply focused than the nearer bushes and ferns, a reversal of the proper order. In Nature the distance is more or less softened by the intervening atmosphere, and to render it more clearly than the nearby objects is to break all the laws of "aërial perspective."

M. S.—A fine composition and arrangement, but either your plate is much overdeveloped or you have used a paper of too great contrast. As it is, one almost thinks at first glance that the meadow is covered with snow. A subject so strong in contrast as this, of trees in shadow cutting against a distance in full sunlight, needs plenty of exposure and careful development. It may be that a soft-working paper might give you better results from this plate.

E. E.—This print is very much improved by trimming two inches from the foreground and one and one-half more from the sky. This leaves a long, narrow panel with very good lines, and you lose nothing but uninteresting sand and cloudless sky. Careful trimming will often make a poor picture good, and a good picture better.

OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Successful Criticisms

With the exception of the prominence of the freckles, which a ray-filter would have avoided, the portrait is a success as regards face and shoulders. But the hands and the book are not as they would appear to the normal human eye under similar conditions, and that part of the picture must be regarded as a failure, to that extent. Nor is the lighting true to any known principle of light and shade. A powerful light—too powerful in my opinion to be artistic—strikes the top of the lad's head and his left shoulder. This should have left the face in a correspondingly heavy shadow; it does not. A secondary light illuminates his face and casts a shadow on his neck and the folds of his collar and shirt. The source of the second minor light is not obvious or discernible. Hence its falsity from an artistic point of view. The reflection from the white paper of the book seems to have produced halation, which a backed plate would have obviated. The whole thing is artificial, too much à la studio.

E. L. C. Morse.

There are four good points in the picture of a boy reading a book or magazine; viz., the figure is well placed, there is unity and there is vigor to the composition and the background is good. The picture is so satisfactory in these respects that the halation especially prominent in the lower third of the picture, the halo of light on the head, the square patch of light on the shoulder from the window, the woollyness of the hair, the lack of detail in the highlights and the shadows, the too prominent texture of the skin, the grotesque left hand and forearm and the too-good-to-be-true



THE PICTURE CRITICIZED THIS MONTH

expression on the boy's face cannot entirely kill its appeal.

CLARENCE A. PIERCE.

THE first thing to strike your attention in this photograph is the excessive black of the hair against the bright, reflected light which almost surrounds it. The effect is not agreeable; the square light also on the shoulder is of unpleasing shape. Also, the open book reflects too much light from its white pages and has fogged the film. The bright light falling on the figure should have been subdued in some way, or else a reflector used to light up the dark part of the head, and a shorter exposure given. Moreover, I think that shorter development would have done more justice to the subject.

M. PAGET.

WHEN working towards the light, the lens must be protected from direct light or reflections from the camera-bed. Shade the negative, so that the lower part will print somewhat darker than the rest, giving the picture a more substantial base. The most glaring defect is the patch of white light on the shoulder, which should have been kept dark in order to concentrate interest on the front of the figure. The line of light along the top of the head is also a defect which might be helped by printing on a much softer paper. This would also allow the shadow-details to flatten out, and the result might be quite pleasing. Shorter development or the use of a diffusing-screen would also have softened the contrasts. The head is tilted sidewise at an awkward angle and the short-focus lens pointed downward at the subject exaggerates this effect.

WINN W. DAVIDSON.

THE posing, with the exception of the left hand, was well done and the figure nicely placed in the picture-space; but the harshness of the lighting spoils the result, technically. The book is absolutely lacking in detail; the light on the left ear is bad, and the two masses on the shoulder and head would indicate that the boy had just passed through a snow-squall. Then, too, the lower part of the picture appears to have been fogged on the negative, and the hair lacks all the characteristics of human wool. The book should have been held a trifle higher. The exposure should have been longer and the print made on the softest available paper. The left ear appears to be double; or did it wag during exposure? However, after all is said and done, this picture is somewhat pleasing for the background is agreeable, the features are fairly well moulded, the highlight on the nose is a correct element in portraiture, and the expression is very natural.

GEO. W. FRENCH.

OUR ILLUSTRATIONS

WILFRED A. FRENCH

In our October issue we showed an example of Mr. John Paul Edwards' artistic skill in landscape photography. This month's frontispiece displays his versatility, by means of an original composition in portraiture. The overlapping of three dark tones,—hair, head-dress and circular background,—while still preserving the distinctive quality of each, is worthy of study. Strength and concentration of interest are gained by the clever manner in which the highest lights, the face and whites of the eyes, are placed against the deepest tone—the hair. The attention is thereby drawn involuntarily and held at the center of interest. Mr. Edwards also displays his skill in breaking up the perfectly symmetrical circular background by allowing the head-dress to over-reach the edge, and cutting into it with the light shoulder at the lower edge. Taken as a whole, this is a markedly successful portrait, which improves on close study.

"Entrance to Queen's College," by Henry Fox Talbot, on page 229, is remarkable for its fine technical qualities, especially when the fact of its having been made nearly three-quarters of a century ago is considered. The lens-work is above reproach, as it will be remembered that highly corrected lenses were not in existence at that period. It is interesting to observe how the corners were clipped off, evidently to disguise the lack of covering-power of the lens.

Camera-workers who are caught in a predicament, where no tripod-camera is available or allowable to make difficult architectural photographs should study carefully Mr. Herbert W. Gleason's article "How I Beat the Official Photographer,"—with accompanying illustrations showing "how to do it," on pages 230 to 235. They demonstrate how a master-photographer gets himself out of an apparently hopeless situation, by sheer force of his sound photographic technique coupled with Yankee ingenuity. Data: "Arches, Court of Abundance" (page 231), contact-print from distorted negative; Auto-Graflex camera; 6-inch Goerz lens; F/11; 1/25 second; Orthonon plate; pyro; Kresco print. Same subject, corrected: 8 x 10 Korona camera; 6-inch Goerz lens; F/32; 1 minute exposure by south window. "Corridor of Transportation-Building at Night" (page 232); same camera, lens, plate, developer and paper, as in preceding subject; exposure 15 minutes at F/7 by starlight. Same subject, corrected; same data as preceding subject. "Tower of Abundance" (page 235); same camera, lens, plate, developer and paper, as two preceding subjects; exposure, 1/25 second, at F/11. Same subject, corrected; same data as two preceding subjects. All three original subjects made in September, 1915, at San Francisco Exposition.

Horace A. Latimer's reputation as an artist-photographer of high rank has been long established. Were it not so, his "Ploughing in Burgundy" would place him among the foremost pictorial workers. A feeling of extreme satisfaction is experienced when looking at this beautiful picture. The original gum print, hung at the Convention of the Photographers' Association of New England, in Springfield, Mass., last August, was the most admired of a representative exhibit of Mr. Latimer's gum prints. If this is not Mr. Latimer's greatest picture, it is surely second to none of his other great productions. The writer feels that this is, indeed, his masterpiece. Data: Exposure made in the old French province of Burgundy, in early fall of 1913; 3¼ x 4¼ Reflex camera; Bistelar lens of 8-inch focus; stop, about F/11; 1/50 second, Eastman film; Metol-Hydro; contact Satesta print from 11 x 14 enlarged negative.

Baby-lovers will all be charmed by Ray Trowbridge's "Ruth" on page 239. "The prettiest baby in the world" is no doubt the verdict of Ruth's fond parents; and who will make bold to dispute them? Data: February, 10 A.M.; indoors; with bright sunlight outside; home-built camera; Struss Pictorial lens, 12-inch focus; stop F/8; exposure, about 2 seconds; Rodinal, in tank; print on Artura Carbon Black, Grade E, smooth buff.

Grace E. Rutter is an accomplished professional portrait-photographer. The fine prints that illustrate her article, "Our Equine Friend," were made purely for recreation, but show that she is familiar with out-of-door camera-work.

The Editor's article, "Aërial Fighting-Cameras," is illustrated from the collections of Messrs. Kadel & Herbert and Underwood & Underwood, photographic publishers. The initial picture of this series, page 247, represents a British barrage-fire through which no human being can live. This wonderful aërial photograph, made by the aviator who was directing the British barrage-fire seen in the picture, shows how the British block off the second-line trench when attacking the front-line. As can be seen, the barrage is falling in back of the German front-line, just before the British go over the top. This stops the enemy from bringing up any assistance to help the soldiers in the front-line trenches. The British line, seen in the lower right-hand corner, can be distinguished from the German first-line which runs the entire length of the photograph, owing to the fact that there are no communicating-trenches between them.

The speed with which the plates exposed by the aërial photographers are finished and completed prints conveyed to the headquarters of the commanding officers is one of the wonders of the present war. In the photograph shown on page 248 the swift messenger is seen handing a package of exposed plates to the darkroom-operator. As explained in the text, an aviator, page 249, is examining one of his photographic efforts. Attention is invited to the thick gloves and the electric ear-warmers that are needed to keep the airmen comfortable at high altitudes.

The manner of operating the aërial camera, when fastened to the side of the airplane, is shown in the picture on page 250.

The famous German pistol-camera, pictured on the same page, is the one captured by a British aviator. Its construction is manifestly ingenious; but the Allied aërial photographers now operate cameras of equal if not greater effectiveness.

The view of the town of St. Pol, page 251, is remarkable for the clearness and accuracy of detail. The fact that it was made from a height of 15,000 feet is also worthy of note. The principal episode is a line of mule-transports on the way to the front. The small, ant-like dots seen on the right are not soldiers, but

mule-transports carrying machine-gun ammunition. The wonderful photograph of the much-discussed Hindenburg line, page 252, shows how well guarded the Germans have their trenches. The direct streak running through the upper left-hand corner is the German first-line of barbed wire. Immediately back of that can be seen second and third lines of barbed wire. Running perpendicular, at the right, can be seen the trenches. The place marked A represents the machine-gun emplacements that have been picked out by the pilot for bombardment by the heavy British guns.

It is seldom, indeed, that so gifted a poet as William Ludlum, is able to give pictorial expression to his theme. His beautiful picture, "The Green Hill Far Away," is full of the sentiment of his uplifting verses. It is to be fervently hoped that these wonderfully expressed thoughts may meet the eyes of many of our boys "over there." They cannot fail to help them in their stupendous task. Data: July 3, P.M.; bright light; 5 x 7 Premo Camera, 6½-inch Velostigmat lens; F/32; no color-screen; 1 second exposure; Orthonon plate; pyro; Professional Cyko print, developed in Duratol.

Advanced Workers' Competition

"SHORE-SCENES!" What a grist of "snaps" have been made by camerists—aspiring and otherwise—titled as above. Many of these "shots" have certainly been "damaging" to the subjects, with faces all askew from the intense sunlight and the one-two-three-four-five-ness of the "grouping" (?); topped with skies of chalky whiteness! From such contemplation, we turn with relief and pleasure to W. C. Sawyer's very original and well-executed picture, "Fun in the Surf," page 257. No impossible sky or textureless sand do we find here. The water is limpid and, moreover, it is in motion, as witnessed by the swirling wavelets curling about the little "kiddies," and running in graceefully curving foam-lines along the beach. The little figures, full of abandon and unconscious grace, are placed just right in the picture-space and the wave above serves to relieve any tendency to monotony in the smoother water beyond. It merits richly the distinction of first prize, which was accorded it. No data.

"On Patrol," by F. I. Jordan; the second prize winner, page 259, is from the collection of one of our consistent competitors, whose first-prize picture of the "Golden Hub," in November, 1915, PHOTO-ERA, was much admired. Although some may consider the tone of the bathing-suit rather strong, yet it carries the eye at once to the dominating figure, and contrasts agreeably with the tone of the dog and the water. The background is particularly happy and really appears to be distinctly separated, by a considerable distance, from the figures—a quality much to be desired and often not obtained. Data: August, 5 P.M.; Ansco Speedex Camera No. 3; Tessar lens, 90 mm.-focus; stop, F/4.5; 1/5 second; Eastman film; pyro, in tank; enlarged on Royal Bromide.

In "The Sentinel," H. L. Bradley, third-prize winner, page 260, shows one of the charming shore-bits for which our coastline is so justly noted. The values in this print are well preserved, even in the deepest shadows, and the "water-quality," without which no subject of this kind can ever be successful, is extremely good. A suitable cloud or clouds would greatly help to improve the already fine result. If none were present, they could easily be printed in, from another negative. The trees on the left help to draw the attention from the rather centrally placed house.

Beginners' Competition

FOR a beginner, Ethel Dismukes has achieved a wonderful success in her print, page 263, which is first choice, by a large margin, in this competition. Its fine decorative effect, together with the delicate manner in which the hanging moss is rendered, contribute to make a result worthy of the prize it received. The old building is in just the proper place to center the interest and adds the touch which gives scale and perspective to the whole composition. A slight trimming at the top may serve to improve the print, by getting rid of the rather scattered lights, or the whole sky could be toned down a trifle. Otherwise the result is very fortunate. Data: April, 5 P.M.; sunlight; 5 x 7 R. O. C. view-camera; Bausch & Lomb lens, 9-inch focus; F/16; 1/5 second; Central Comet plate, developed in tank. Printed on Azo A Hard.

The second-prize picture, "The Story-Hour," page 265, is very nearly a great success. The fact that the child with the dark hat is on the shadow-side of the man whereas the light hat is on the light side, is worthy of favorable comment; especially so, if these figures were so placed intentionally by the camerist. Had they been in the reverse position, the composition would not be so good. The unconscious attitude of the figures is praiseworthy. The children, particularly the one on the man's knee, are apparently deeply interested in the story. The man's expression is fine; so is the position of his hand. The lens-work is good, as are the other technical qualities. A few hints as to improvement will not be amiss. It was unfortunate that the chair was placed over the joint in the walk, as it produces a distracting line which divides the walk into two rectangles. A better way would have been to place the chair on a clear space. The sky, and lawn below, could be subdued a little.

Before concluding, I cannot refrain from inviting attention to the two interesting photographs that enhance the importance of the special competition announced in the rear advertising-section of this issue.

The hasty snapshot of Madame Petrova, the eminent Russian motion-picture artist, was made while she was engaged in selling war-savings stamps on Boston Common, and under adverse conditions, by Mr. Alfred Brust, of the photo-finishing department of the Robey-French Company, Boston. Mr. Brust is actively interested in the pictorial history of the present war and has sent a number of fine pictures to the War-Prints Division. Data: about noon, under trees; Graflex plate-camera; Carl Zeiss F/4.5; used at full opening; 1/75 second.

On the same page, and serving as a companion-picture, is a group of two sailor-boys, old-time favorites in the base-ball world—Shore, first-string pitcher, and McNalley, star infielder, both members of the Red Sox team, the work of Andrew F. Donnell, official photographer of the *Boston Sunday Post*. Mr. Donnell has made many valuable war-records with his usual eye for good composition, technical excellence and patriotic zeal.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is "Peek-a-boo!" by Willard H. Harting. To assist at a better understanding of the composition, the following data are supplied: March 31, 1918; 3.30 P.M.; in shade on sunny day; 2¼ x 3¼ Ansco camera; 3½-inch Modico Anastigmat; stop, F/8; 1/25 second; Ansco Speedex Film; Eastman Tank-Powders; 5 x 7 Cyko Studio enlargement.

ON THE GROUND-GLASS

WILFRED A. FRENCH

War-Photographer Wins Distinction

Mr. W. M. Snell, who has charge of the lens-department at the Robey-French Company, Boston, is one of the best-informed men in the photographic business. In commenting on the progress of the war, recently, Mr. Snell told me of a photographer who had so distinguished himself at the battlefront, that the French general, commanding the division in which this special photographer was doing important work, bestowed upon him the *croix de guerre*. "And," Mr. Snell added, "they say that his father made a great reputation as a disciple of *Daguerre*."

Entries that are Incomplete

Persons privileged to enter either Photo-Era competitions are those that comply with all the rules, which are printed fully and plainly in each issue of the magazine.

Entries, like the following, are wholly inadequate and are kept in abeyance:

"I am sending you herewith a picture (or pictures) for your August competition."

——— ——— ———

(Sender's name.)

Why? simply because the sender failed to state whether for the Advanced or Beginners' Competition. He also neglected to enclose the required data, and declaration that he was the sole, unaided author of the prints submitted.

The Editor cannot be expected to spend time, stationery and postage to remind the sender what is required of him. In most cases, however, competitors observe scrupulously the rules and conditions of the two competitions, and the Editor aims to reciprocate in kind. If he is not so prompt as he would like to be, it is simply because he is pressed for time, and he is glad to be reminded of any neglect on his part.

Emergency Eye-Glasses

Photographic knowledge, even if it be theoretical, is sometimes useful in everyday-life. The Editor had the misfortune recently to break his eye-glasses, both glasses being shattered by falling on a hard-wood floor. He was entirely alone at the time and, being thus helpless, he was unable to read fine printed matter. That is the trouble with persons who are afflicted with compound astigmatism. Desiring to obtain the address and number of an optician from the telephone-book, and remembering the action of the diaphragm in photography, he at once improvised a temporary substitute for his broken eye-glasses. Taking a piece of note-paper, he made a small, round hole with the point of a lead-pencil. Holding the tiny orifice close to one eye, he was enabled to read with ease the desired information in the telephone-book. After having communicated with the optician, he continued his experiments with the miniature stop, which measured about 1/32 inch in diameter, and found that, used as before, it reduced the illumination of objects considerably. Transparent shadows became opaque; detail in shadows disappeared, and near objects looked smaller than when viewed through the eye-glasses.

It is this same pin-hole which takes the place of the regular lens in a pin-hole camera and produces perfect photographs. The reader will derive much diversion and knowledge by experimenting in a similar way; but only briefly, as peering through so small an aperture is apt to impose a strain upon the eye. Of course, a pin-hole more than 1/32 inch in diameter will yield only a blurred image. It's an interesting lesson in optics.

(*Reprinted from* Photo-Era, *January, 1914.*)

A Patriotic Typewriter Artist

The predominant feature of the Editor's daily mail is the expression of true Americanism and appeals for the Fourth Liberty Loan expressed by word and picture. Once in a while, a correspondent with artistic skill will introduce an effective sketch. But the latest novelty —ingenious, striking and easily produced—marks the correspondence of Michael Gross, the author of the recent Burson stories and the current "Professor Pyro" talks. His latest message was typewritten by himself on a full-sized letter-sheet, and the three-inch space below his signature was occupied by two rows of soldiers arrayed in perfect alignment with arms at right-shoulder shift, and a sergeant at the end of each line. At first glance, one gets the impression that the lines of soldiers, composed of twenty-three each, was printed from some new form of military ornament cast at the type-foundry; but a close inspection shows that each figure was formed by symbols and signs found on the keyboard of the typewriter—hence the regularity and precision of each individual figure. Thus fraction-marks (for the slanting rifles), dashes, exclamation-points, quotation-marks, the letter o, small and in capitals, and other devices are combined in clever fashion to represent a long line of well-drilled infantry. Below the lines of soldiers, appeared—long drawn out—the word "Attention," followed, below, by another line, across the page—"Buy Fourth Liberty Bonds," the whole effect being significant and timely. We award the palm of patriotic novelty to Michael Gross.

The Danger from Optimism

Undue optimism, based upon crass ignorance of military conditions, will only bring impatience and disappointment. Our real achievements are encouraging enough. We must back them with sustained effort, and not allow ourselves to relax through any expectation of an early victory.

Flashlight

Chemist's Wife: "My husband is, as usual, in his laboratory conducting chemical experiments. He is working on a new flashlight-compound and expects to go down to posterity." (From the laboratory) Br-r-r! Bang!

Caller (startled): "I hope he hasn't gone."

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

He Will Do His Duty

To-day you met an acquaintance who looked harassed and exhausted. You asked him, knowing him somewhat intimately, if he was feeling under the weather and suggested that he consult his physician. He fairly growled at you as he replied that he was all right. He didn't tell you to mind your own business; but his countenance carried that command.

He wasn't suffering physically. He wasn't worrying over the possibility that the influenza might lay him low. His business is going along at a fairly satisfactory rate, and none of his customers has gone unexpectedly into bankruptcy. But still he has what may be called a reason for his looks, his feelings and his verbal volleys.

For some days, he has been inventing and experimenting with pretexts for not doing his plain duty to the Fourth Liberty loan. He could not limit himself to one pretext, carefully planned, because a single pretext would not stand the pressure of legitimate argument. And so he has turned from one to another, mostly original, some of them fairly creditable, from an inventive standpoint, and all of them based on a curious determination not to do what one's friends and neighbors are doing.

That is why your friend is haggard and gruff. That is why he evades and cuts short some of his best friends. It is telling on him. But it is only for a day or two. He sees the light, but is not quite ready to admit it. He knows where the path of practical patriotism lies, and he intends to follow it. But the waste of nervous energy and physical resources which his delay involves is entirely regrettable.

Notice to Librarians

Many librarians and subscribers, desiring to bind the first volume of the year of Photo-Era, and not finding the index for same in the June issue, as formerly do not seem to be aware that since 1910 the index for the entire year—two volumes of six issues each—has been, and is now, published exclusively in the December issue of each year.

The Work of W. H. Rabe

The Portland Camera Club, of Portland, Maine, will continue to hold one-man exhibitions of the work of America's foremost photo-pictorialists, as it has done for the last two seasons. The first shown this season (in September) was of W. H. Rabe, of California, followed, in October, by George Alexander.

The pictures of Mr. Rabe gave profound pleasure to all who saw them; and one of the members of the Portrait Camera Club—himself a pictorialist of high rank—was so favorably impressed by the beauty of Mr. Rabe's work, that he gave expression to generous sentiments, which we are permitted to give to our readers:

"A purist in photography, Mr. Rabe, as he himself expresses it, aims to do his work in the simplest way and with the least outlay. With an outfit of the most inexpensive character, he produces his pictures on small negatives and then enlarges on bromide paper through a soft-focus lens, using the same developer for his prints as for his negatives.

"Mr. Rabe has been photographing for many years, but has been producing pictorial work only since 1915. In that year, he exhibited in London and was represented in *Photograms of the Year*. In 1916 he was made a member of the Pittsburg Salon. Since then his pictures have been shown in all of the larger exhibitions and Salons in this country and Canada, as well as abroad.

"Mr. Rabe's work is direct and forceful, simple and unassuming, with no striving after dramatic effect; but representing with truth and vigor the beauties of nature. This artist owes much of his reputation to his wonderful night-pictures in which class of work he is equalled by few and, probably, excelled by none. Filled with mystery, they possess the real atmosphere of the night. Dark and sombre as they should be, they yet possess a luminosity and transparency which is quite unusual in night-pictures."

The General Opinion

The August issue of the Photo-Era (Boston) gives no evidence so far as deterioration is concerned of the oppressive war conditions under which all publishers are now working. This periodical has long stood at the head of the photographic journals and it is gratifying to know that it is able to maintain its unusually high standard of excellence.—*The Spatula.*

B. Y. M. C. U. Camera Club

This club of amateur photographers has grown to be one of the liveliest in the country. Its activity during the coming winter-season is shown by a series of one-man exhibits, each consisting of twenty-five pictures, to be given at its rooms, 48 Boylston Street, viz.: Dwight A. Davis, Worcester, Mass.—November; Francis O. Libby, Portland, Me.—December; Arthur Hammond, Boston—January; John H. Garo, Boston—February; Arthur F. Kales, Los Angeles—April; Edward H. Weston, Tropico, Cal.—May.

One-man shows were held in September by John Paul Edwards, of Sacramento, and, in October, by Dr. Rupert Lovejoy, of Portland, Me.

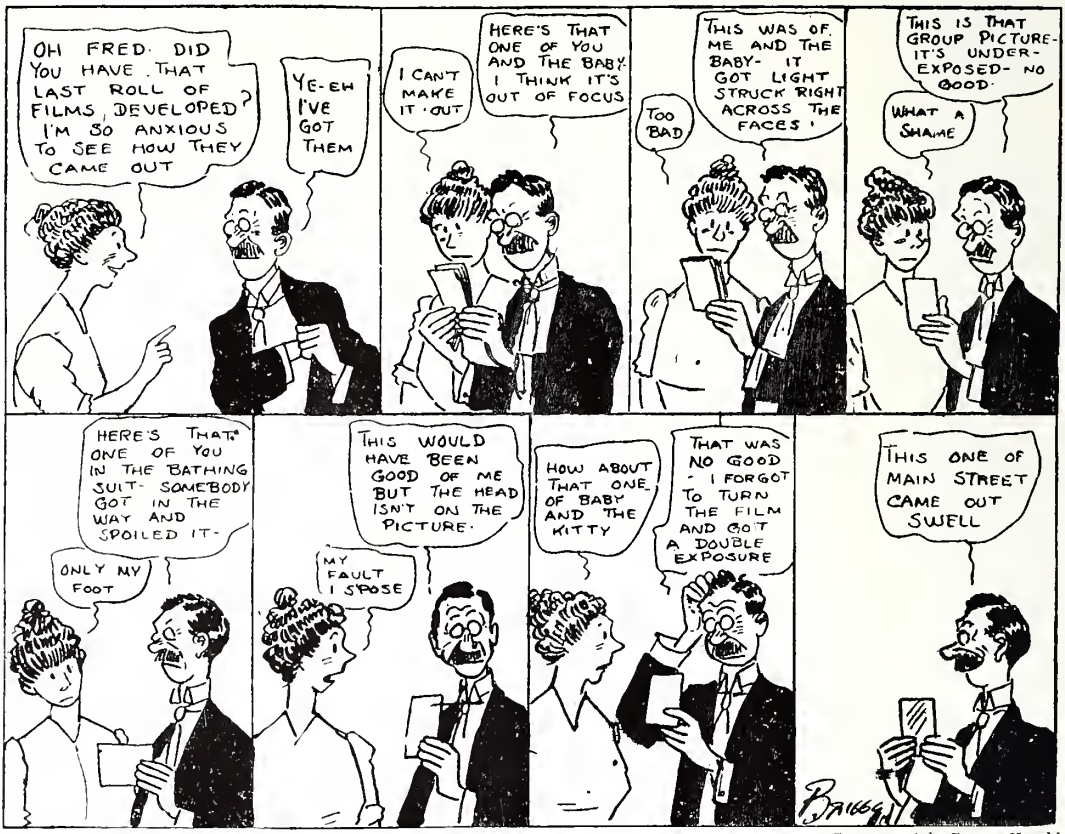
The annual exhibit by club-members will take place in March, 1919.

The club-rooms will be open to the public every Wednesday evening from 7.30 to 9.30, and Saturday afternoon, 1.30 to 5.30. Everybody interested in pictorial photography is cordially invited.

Chicago Camera Club

Among the best talks given to the members of the Chicago Camera Club during September, was one on the Bromoil process, by L. D. Carter, a member. Another was on studio-portraiture, by Edward D. Waters. This professional craftsman has made a deep study in the psychology of his profession, to the end of attaining a pose and expression in the subject

It Happens in the Best Regulated Families - - - By BRIGGS



Courtesy of the Boston Herald

that is characteristic and natural. His work is artistic —unobtrusively so—well spaced and satisfying.

The annual election of officers, held recently, resulted as follows: president, G. C. Abbott; vice-president, W. F. Wienecke; secretary, W. H. Klose; treasurer, O. W. Bahl. Committees on various activities were appointed and a big year is looked forward to. Club-members are turning out better work, a great stimulus being the two cups which are being contested for.

Meetings are held every Wednesday at 616 S. Michigan Ave., and any visiting members of out-of-town camera clubs are cordially invited.

The Pittsburgh Salon

The Sixth Annual Pittsburgh Salon of Photography will be held in the Carnegie Institute, Department of Fine Arts, during the month of March, 1919. For further announcements see the next issue of the Photographic Journals. The conditions of entry and entry-blanks will be forwarded later on request from any one interested, on application to Charles K. Archer, Secretary, 1412 Carnegie Building, Pittsburgh, Pa. The last day of entry will be about February the 10th. In the words of President O. C. Reiter—"Photography is helping to win the war."

Harm in Unwarranted Boasting

A lot of misleading twaddle is being printed in a certain portion of our daily press regarding the rapidity and volume with which we are duplicating most of the chemical dye and optical products imported hitherto from Germany. To be sure, we have become independent of over-seas supplies of a good many commodities in which resourceful and industrious Germany has specialized for so many years. This is only a natural phase of international commerce; but to say that we have, in the short period of one year, accomplished what has taken one of the most skilled and enterprising of nations about half a century to develop and perfect, is to lay ourselves open to ridicule. A newspaper that refers in such an extravagant way to certain highly developed industries, does not succeed in deceiving an intelligent public, least of all the Germans. Such silly and sensational talk may be the means to obtain a few additional readers for a dull newspaper; but it certainly does not help our industrial enterprises, nor does it add to the dignity and self-respect of ourselves as a great and powerful nation.

A report, similar to those frequently printed in some of our professedly patriotic dailies, appeared recently

n a sensational English paper, to the effect that someone had secured "257 recipes" for making coal-tar dyes, supposed to have been obtained from Switzerland and brought to England in a "Foreign Office bag." In a recent address before the Royal Society of Arts, Dr. M. C. Forster referred to the story in a very pungent manner, and we commend his remarks to that small portion of the American Press which attributes to certain of our manufacturers a well-nigh impossible degree of skill and capacity. Mr. Forster remarked (we quote an eminent English cotemporary): "It evidently needs to be said that Germany earned the dye-industry, won it from nature by hard work, indomitable patience, far-sighted employment of profits in fresh experiments, skilful organization of resources, careful attention to the requirements of customers, scientific control of manufacturing-operations, ever-widening enlistment and encouragement of chemists, economic utilization of by-products, ingenious application of engineering-principles, and acquisition of cheap raw materials. If, after nearly four years of war, we cannot clear our minds of the pitiable nonsense which would suggest that forty years' exercise of these factors may be packed in a Foreign Office bag and stolen, we shall not only fail to establish the dye-industry, but we shall richly deserve to fail."

Enemy Members of the R.P.S.

Strong opinions have been expressed in our hearing about the neglect of the officers and council of the Royal Photographic Society to make a clean sweep of its German and Austrian members; and it would be interesting to know if any steps whatever have yet been taken. Some of the memberships affected have lapsed by non-payment of subscriptions; but this does not apply, for example, to the Honorary Fellows. Nor are naturalized Germans in this country affected. A definite instruction to its honorary solicitor to draft amended Articles of Association providing for the removal of all alien enemies from its roll, including those naturalized within the ten or twelve years preceding the war, would show that it meant business. If such a proceeding led to the resignation of one or two members who appear at present to be suffering from what may be called German sympathies no harm would be done. The prestige of the Society would stand all the higher, for some definite indication that it is in line with the general feeling of the country in such matters. And no one will question the fact that a little improvement in the prestige of the Society would do it no harm at the present moment.

A. P. and P.

Sagging Bellows

With age and use, the bellows of the camera tend to get softer and more flexible: and there comes a time when, with a long extension, they sag so much that part of the image will be cut off. It will be that which falls along the bottom edge of the ground-glass; and, in hurried focusing, it is very easy to overlook the fact that there is a strip there which is receiving no light from the lens at all. The fact is realized, however, when the top of the negative is found to have a band of plain glass along it. If there is any chance of this happening, it should have special attention. For the time, the bellows can be propped up with a matchbox or similar object slipped between them and the baseboard: but the sooner they are done up and restiffened, the better.—*A. P. and P.*

The Hair in Portraiture

Much of the portraiture that one sees is spoiled by reason of the fact that operators give far too little attention to a proper rendering of the sitter's hair. Either we see it blurred, almost to wooliness, and far from natural, or else it has the texture of fine wire; and in this latter case the eye of the beholder is irritated by the intense sharpness. The aim of the operator when focusing for the hair is to give a suggestion of luster and texture. With many feminine sitters much that is delightful may be traced to beautiful hair, and upon a satisfactory rendering of this much of the success of the picture depends. To get the best results, color will have to be taken into consideration, and an ortho plate of the anti-screen type used, or the exposure made upon a panchromatic plate without a screen, in preference to the portrait or studio plate; in either case a more satisfactory rendering of the color of the hair will be obtained. It is not always admissible to make any suggestions with regard to dressing the hair, but a hint may be given to the sitter as to the advisability of keeping to the everyday style in preference to anything fresh, as is so often done when a picture is to be made. In the latter case much of the natural wave and luster of the hair will certainly be lost. Hair-ornaments or ribbons of any kind are best avoided, as they only create a distracting note.

Lighting will be found to play an important part, and if this point is given attention the black textureless patches so often seen in portraits will not appear. A very slight diffusion, avoiding the needle-point definition, which gives the unpleasant "wirey" effect referred to, is a great help; but it must not be carried too far, or the suggestion of the natural wave and texture will be lost. In this the soft-focus lens is of great assistance.

Perhaps the most difficult hair to render in a satisfactory manner is that which is long, dark, and without much luster. In this case it is best to use as strong a lighting as possible, in order to give what texture there is a chance to be seen at its best, and then by diffusion to counteract the difficulty.

When dealing with male sitters, the hair is generally of less account, unless it forms quite a characteristic of the sitter, and so presents less difficulty in this respect. Perhaps bearded men are amongst the greatest problems the operator has to encounter, as anything of a "wirey" or "ropey" nature is quite unpleasant, and will neither satisfy portrayer nor the portrayed. With bearded men the beard is an individual feature, and must be recorded successfully. And here again the diffusion given by the soft-focus lens will prove helpful. The point to be noted is that all the sitters who are photographed have some distinctive characteristic in hair or beard (if one is worn), and no result can be regarded as pleasing unless a faithful rendering of this is presented, and the points set forth above are worthy of the study of all operators, being some of the small things by which the success of photography is made up.—*British Journal.*

Change in Our December Competition

Owing to the increasing interest in genre-photography, we have decided to change the Flashlight Competition to Indoor-Genres, the closing-date to remain December 31. Our competition, Outdoor-Genres, appears to have aroused widespread enthusiasm, and we believe that a competition devoted to Indoor-Genres will be heartily welcomed by amateur and professional photographers.

PHOTOGRAPHIC THRIFT

Photo-Thrift

Amateur and professional photographers are just as eager to help win the war as those engaged in other activities. The saving of time and material is vital. Photo-Era leads—more often than it follows—a worthy cause. In the present instance we believe that Photo-Era is establishing another precedent. Surely, our readers must know many methods whereby a saving of time and material may be made. Now is the moment to give photographers the benefit of personal experience with regard to the saving and the economical use of plates, films, developers and accessories. If one ounce can be made to do the work of an ounce and a half—*that one half ounce is worth saving!* If the use of a 4 x 5 kit in a 5 x 7 camera may be used to advantage to save plates and developer, we will welcome such information in this column. Moreover, to show that we appreciate the efforts of Photo-Era readers, we will give a six-month subscription to every contributor whose letter we consider of practical photo-saving value. We hope that readers of Photo-Era will realize that this new venture depends upon them for success. It is a patriotic effort to help amateur and professional photographers save in every way possible. It has a direct bearing on winning the war and deserves hearty support at once. Make every contribution as brief as possible—not over one hundred and fifty words. Paper and ink must be saved; and we ask contributors to bear this in mind. Now, let every reader get down to business and send his contribution not later than the twentieth of the current month.

For example, we might give the case of some camerists who expose from two to five plates or films on every subject in order to obtain "one good one." If the professional knows his business, one exposure for every pose should be enough. With regard to the amateur, he should bend every energy to master the technique of exposure to the end that he, too, need make but one exposure for every subject. An exposure-meter is of great value. In printing, waste may be eliminated by correct exposure and the selection of the right paper. In short, aim to make every click of the shutter result in a satisfactory picture.

Practical Saving-Methods

Editor, Photo-Era

Dear Mr. French,—I note with interest that Photo-Era, always ahead on new wrinkles, has introduced a "thrift-column," for the exchange of ideas on the subject of saving, and economizing in the practice of photography. One economy I have practised for a number of years, may be worth while passing along, through your new column, namely, the use of one lens on three different sizes of cameras. The lens in question is a series VIIa Ross-Zeiss Convertible anastigmat, of 7 inches focus, composed of an 11½-inch and a 14-inch single element, each of which is a highly corrected lens, covering plates up to 8 x 10 inches.

I use this lens as a doublet, on a 4 x 5 camera, for general work—landscape, architectural, marine, etc. The 11½-inch single is of value as a long-focus lens, for occasional use.

On a 5 x 7 camera, the doublet is a fine instrument for architectural work and all other subjects that require a medium angle, whereas the 11½-inch is just right for most landscapes. The 14-inch lens makes a long-focus lens, which leaves nothing to be desired, and is also useful for narrow-angle work, close up, where a large image is wanted, such as a detail of a building, or similar work.

For the 6½ x 8½ camera, I make use of the 11½-inch lens for most of the average work out of doors. The 14-inch is the landscape-lens *par excellence*, in this size, and gives very fine results, indeed, of all such subjects where the image is wanted in good size, cutting out all useless matter. The 7-inch, I use only for occasional wide-angle work, on 6½ x 8½, when forced to do so by confined situations, out of doors, and for interiors, for which it is very convenient.

While it is true that this lens is not an inexpensive one, so far as first cost is concerned, it has proved to be the cheapest I ever owned—covering, as it does, such a large number of uses and saving the cost of at least two additional instruments.

Yours faithfully,

E. H. Washburn.

To the Editor of Photo-Era:

You deserve high praise for your Photo-Thrift Column, which is timely and useful. Here is a suggestion that may find favor with many of your readers.

Winter-work among amateurs will be begun very soon. As for myself, I am planning to do considerable pasting and mounting, for which I shall use those narrow strips of mucilage which you are advertising in your publication. The moment I heard of this new product, I purchased a small lot from my dealer, and was so delighted with its successful application, that I now use them not only for regular photographic work, but in my scrap-books and in other ways. Briefly, I have discarded the old-style mucilage-bottle and sincerely recommend these new mucilage-strips to the many amateur and professional photographers who read Photo-Era, from month to month.

Cordially yours,

A. C. Dalton.

Patriotic Pictorial Competition

The pictorial competition announced in the advertising-section of this issue, should stimulate every camerist in this country to produce a striking record of any one of the many scenes suggested in the announcement. Tell every camerist you know, of this unusual competition, which is open, without restrictions, to all —amateurs and professionals alike.

The cash prize of $15.00 for the best picture, and $10.00 for the second best, together with the honor and satisfaction to help Uncle Sam assemble first-class permanent records of this great war, should stimulate every camera-user to get busy. Remember that the closing-date is December 15, 1918.

LONDON LETTER

CARINE AND WILL CADBY

The Amateur Photographer and Photography, that new combination of a photographic paper, seems to be running smoothly and gathering new subscribers. It is the voice of Jacob but the hand of Esau, and no one here has quite got accustomed to the editing of the printed matter by Mr. R. Child Bayley, while Mr. Mortimer has charge of the illustrations. The former has retained most of his regular contributors, and "Piffle" still amuses us on the last page; and we readers are only too glad to still find him there, for we cannot afford to lose anything that can create smiles in these anxious times. The "Causerie," which always makes interesting and often amusing reading, is still continued. The "Bandit," who criticizes beginners' prints and whose style of writing is always personal and alive, is so uncompromisingly honest that those who submit prints for his criticism get really valuable advice. Perhaps, one of his most comic criticisms was when he seriously asked some ambitious beginner who had sent him a little snapshot-view, if "this sort of thing is worth while doing!" This, in a paper devoted to photography, shows an honest critic and a courageous editor.

In the good old peace-days, we used sometimes to have to judge and criticize beginners' prints; and what that experience has taught us makes us more lenient to the thing that the "Bandit" considers "not worth while." The reason that beginners have the confidence to submit their early efforts to the criticism of experts is because they think their work so much better than it really is. They are not vain, only self-deceived. Whoever photographed that very ordinary little view the Bandit condemns, sees it with very different eyes. For him, some of the charm of the reality is over it and his imagination supplies what is so lacking to the ordinary observer. Probably, a year later, if he should come across the print, he will see its defects; but there are cases when the illusion will hold good for ever.

Dr. Abrahams—now, of course, Major Abrahams—had an article in a recent issue of the *A. P. and P.* on "The Photography of Motion," and it was interesting to see some of his newer work. Over here, there is no one to excel him in the clever way he is able to suggest movement by the camera. We remember a lecture he gave once to a Salon audience, just before the war. His illustrations were thrown on a screen and such vivid and realistic jumps, leaps and climbs did we witness that, in spite of the lecturer's calm and leisured manner, we came away feeling breathless and exhausted, as if we, too, had been assisting at some strenuous feats. We have this weekly photographic paper to keep us in touch with photography; but the only monthly one to be had is PHOTO-ERA. Some of us are lucky enough to get copies and very much appreciate it. It is of a higher order, pictorially and from a literary point of view, than any photographic magazine we have had over here. Naturally, the chief interest of such a paper is the illustrations, and those in PHOTO-ERA are not only good, sound photographic work, but many have that originality and charm that is so inspiring and stimulating to ordinary workers. One cannot set too high a standard to beginners; they will never be able to keep up their interest in photography if they see only mediocre and second-rate examples. Besides, the photographs reproduced in PHOTO-ERA are no more difficult to achieve than that kind of pretentious, pseudo-artistic photography beginners are sometimes invited to admire. Distinction and simplicity need taste more than technical skill, and this, surely, examples of the best work will help to develop.

Speaking of taste, the reader may think it is not, perhaps, in the best taste for contributors to praise the journal for which they write; but as ours is but an humble letter, innocent of illustrations, we may be forgiven.

Much as we have always enjoyed PHOTO-ERA—its literary matter, as well as its illustrations—it is now more interesting to us than ever before. A writer in this week's *New Statesman* rather voices our sentiments. He writes regretting the decision of the American Government prohibiting the sending of any more exchange-copies of American periodicals. "Now, at any time," he says, "this would be a great pity, in view of the desirability of English and American journalists keeping in touch with each other. But at this time, of all times, it is a greater pity than ever. England and America have drawn closer than ever before; we want to know more about America, and America wants to know more about us than at any time in the last hundred years; and I think that any editor who is accustomed to receive American periodicals would bear me out when I say that these have never been read so regularly and consistently in London offices as they have during this year."

The Camera Club is already making ready for its winter-season. In November, Mr. A. H. Blake is hoping to organize an exhibition of pictorial photographs of London. One hopes that some of his own work will be there; for Londoners always enjoy seeing their city represented in Mr. Blake's pictorial manner. Before the war, he had a big collection of pictures showing "London by Night." The present night in London is of such inky blackness, that it is well beyond the camera's power of portrayal and, unfortunately, no photographic records of its darkness can be made.

The present exhibition at the club is one of drawings and paintings by members. We are looking forward to visiting it, for photographers' efforts to express themselves by some other medium than the camera are always interesting. In a way, one is behind the scenes and seems to know at what they are aiming. "Does one though?" asks the writer of this letter who, at present, is not wielding the pen, and, as Mr. Arbuthnot is given as an example, one has to confess to not always possessing the key to the aim. It is rather difficult to reconcile this photographer's ultra modern paintings with his rather obvious and not very inspiring portraits of actresses now flooding the illustrated press.

Boring Rubber Stoppers

To bore a hole in a rubber cork is a problem to anyone who does not know the trick, but simple enough when that is known. It is to moisten the borer with a little of a fairly strong (ten per cent.) solution of caustic soda or potash. It will then cut the rubber with little more difficulty than it will cut cork.

A. P. and P.

RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER

The following patents are reported expressly for the Photo-Era Magazine from the patent law offices of Norman T. Whitaker, 370 Whitaker Building, Washington, D. C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The great development of photography is clearly demonstrated at the U. S. Patent Office. Although the War-Department guards carefully all important inventions, many patents are obtainable.

Patent, number 1,276,743, has been granted to Austin Carl Fisher, Rochester, N. Y., assignor to Eastman Kodak Company, a Corporation of New York, on Folding-Camera.

Frank W. Lovejoy of Rochester, N. Y., assignor to Eastman Kodak Company, a Corporation of New York, has been granted patent, number 1,276,779, for Photographic Film.

Patent on Substance for Use in Photography and Method of Making the Same, number 1,277,048, has been granted to Alfred De Brayer, Paris, France.

Patent, number 1,276,289, on a Photograph-Washer, has been issued to Paul D. Ulrich, of Hershey, Pa., assignor of one-half to Abraham T. Herlman of Hershey, Pennsylvania.

Clyde J. Coleman of New York, N. Y., has received patent, number 1,276,330, on a Photographic Film.

Patent, number 1,276,542, on Inscription-Means for Cameras and Methods of Photographing Written Inscriptions, has been issued to Elmer G. Kesling, Bloomfield, Mo.

Patent, number 1,276,663, on Photographic Shutter, has been issued to Rudolph Klein and Theodor M. Brueck, Rochester, N.Y., assignors to Ilex Optical Company, a Corporation of New York.

A Shutter for Cameras, patent, number 1,275,230, has been issued to Jesse H. Dobby, Elgin, Ill.

Patent, number 1,275,239, on Photographic Printing-Apparatus, has been issued to Wyatt Richard R. Frye, Washington, D. C.

Levi H. Hall of Pittsburgh, Pa., has invented a new Photographic Print-Washer, patent, number 1,275,556.

A Photographic Apparatus, patent, number 1,275,573, has been issued to Henry E. Lichtenstein, Woodmere, N. Y., assignor of one-half to Charles G. Hensley, Brooklyn, N. Y., and Solomon K. Lichtenstein, N. Y.

Patent, number 1,275,753, Film-Developing Apparatus, has been issued to John A. Robertson, Rochester, N. Y., assignor to Eastman Kodak Company, a Corporation of New York.

Lemuel Lester Stevenson of Emporia, Kan., has invented a new Photo-Adjuster, patent, number 1,275,784.

Edwin C. Meyer of Thane, Alaska, has invented a Camera, patent, number 1,275,965.

Patent, number 1,275,989, Photographic Film, has been issued to Frank W. Lovejoy, Rochester, N. Y.

A Camera-Carriage, patent, number 1,274,561, has been issued to Robert Kroedel, Rochester, N. Y., assignor to Eastman Kodak Company, a Corporation of New York.

Patent, number 1,274,651, a Device to Develop Photographic Films and the like, has been issued to Samuel Windrem and David Donaldson Young of Belfast, Ireland.

Painted Backgrounds in Portraiture

That the logically artistic use of painted backgrounds in high-class photographic portraiture is interesting professional portrait-painters, is shown by the fact that Mr. William Howe Downes, art-editor of the Boston *Evening Transcript*, quotes liberally from an article on this subject by F. F. T. in a recent issue of *The Amateur Photographer and Photography*, London.

Says Mr. Downes: "F. F. T. states that it is still quite a common thing to find in a photograph a painted landscape or seascape 'ending abruptly in a foreground carpet, on which stands an elaborate chair occupied by the sitter.' Or, a commonplace person in outdoor dress is posed before a crude painting of the interior of a baronial hall. Such devices, one would suppose, have become obsolete in our day, but it seems there are still occasional survivals of the dark ages in photography. Who does not remember the time when photographers employed that instrument of torture, the head-rest, or head-holder, an arrangement of adjustable iron arms, attached to an upright, which were well calculated to make the sitter feel as if he were in the vise-like clutches of some mediæval demon of the Spanish Inquisition.

Nowadays, the up-to-date photographic artist devotes as much attention to an appropriate and effective background as a portrait-painter. F. F. T. says that advanced professionals have a wide range of backgrounds, artificial and natural, in their studios, and these they employ with knowledge, and skill to suit their sitters and produce a harmonious and convincing result. It may be taken as a safe general rule that the plainer and more unobtrusive the background, the better. It is because this rule holds good also with outdoor portraiture that the advice is so often given to avoid such backgrounds as fences, trellis-work, brick walls, and foliage. Such details detract from the portrait because they are too elaborate and complicated, and demand too much attention. Hence the application of such terms as fussy, busy, fidgety, and restless.

While the ideas of F. F. T. on this question are in general sound enough, it may be said that they are negative, and he does not consider the wide field that lies open to the experimental portraitist, particularly in outdoor work. There is a tendency, which should meet encouragement, to conceive the portrait as a composition, that is, not merely as a likeness of the person, but as a pictorial exposition of the individual in congenial surroundings, which help to explain him, very much on the principle of the old portrait-painters who, in painting the ship-owner, for example, showed, through an open window in the background, a glimpse of the sea and ships under sail."

The boy who went to the movies and saw the following nugget of wisdom on the screen got his money's worth: "I am going to work hard, because I have noticed that those who know the most usually run things."—*The Spatula.*

WITH THE TRADE

The White Writing-Fluid Par Excellence

The uses to which a reliable white writing-fluid can be put by camerists and photographic workers, have been explained many times in this magazine. Such a fluid is also indispensable for purposes of decoration on the margins of mounted photographs or in photo-albums. The best article for these uses, undoubtedly, is "Snow-White." We have been using it in our office quite successfully.

Sydney, New South Wales,
29th May, 1918.

Dear Mr. French:

Recently, there appeared in the *Scientific American*, and was copied in other papers, an article describing an invention alleged to have been made in England and taken to America by Eugene Lauste, of a means to synchronize sounds and movements, by photographing the sound-waves simultaneously on the same film with the pictures. It is stated that the pictures are flickerless.

This invention, with the addition of my flickerless kinematograph, is apparently identical with that described by me in the issue of your Journal of October, 1909, which was so ably reviewed by you in your November issue of that year.

The invention was devised by me in Melbourne and taken to London, where I allowed John St. Vincent Pletts and Eugene Lauste (both technical engineers) to join with me in assisting to carry it out; and a patent was secured in our joint names for same, but they were in no way interested in my flickerless kinematograph invention.

I feel that it is decidedly unjust that he should take advantage of all my knowledge and work, and get credit for the invention, by seeking to bring it out as his own, without even acknowledging that it emanated from me. It is poor satisfaction for all my work.

With kindest regards and best wishes,
Yours sincerely,
R. Thorne Haines.

Praising Aurora Life-Studies

Dear Sirs:

Received portfolio of halftones and photo-prints of Aurora Life-Studies, and I wish to say that they are very beautiful.

I will gladly recommend them to any one, and beg to remain

Yours in appreciation,
R. E. Benoit, *Illustrator.*

It Pays to Sell Photo-Era Magazine

A prominent photo-dealer in New York state, who had been getting twelve (12) copies of Photo-Era a month, increased his standing order to 20 copies, last summer. October 10, he wrote: "Mr. French—make standing order 36 copies a month; your September and October numbers were great! Keep up the quality and the demand will increase."

An Accomplished Business-man

The Wollensak Optical Company is fortunate to have, as a member of its staff, a man who not only fills his position in a highly creditable manner, but who finds time to develop an accomplishment of general usefulness. Thus, he has acquired by intelligent study and diligent practice the important gift of public speaking, and has also cultivated an already pleasing personality. For several years past, he has added to the enjoyment at photographers' conventions by timely, practical talks on photographic lenses and other useful topics, delivered always in a clear and faultless manner. Indeed, a convention, to be entirely successful, generally includes the name of J. A. Dawes among its speakers.

Mr. Mortimer's Picture "We Are Ready Now!"

In response to many inquiries for copies of the now famous picture, "We Are Ready Now!" by F. J. Mortimer, F.R.P.S., published in September Photo-Era, we wish to state that we are prepared to supply carefully prepared engraver's proofs with liberal margins and printed in artistic brown color. The price is $1.00 each, mailed safely packed and postpaid to any part of the United States.

The Newest Treatise on X-Ray Work

It is with pleasure that we have received and read an illustrated pamphlet on the subject of X-Ray work, from the press of the Eastman Kodak Company, Rochester, N. Y.

We note with pleasure and satisfaction that this reliable treatise on so important a subject may be had free, by anyone interested, by merely writing to the Eastman Kodak Company and enclosing a three-cent stamp.

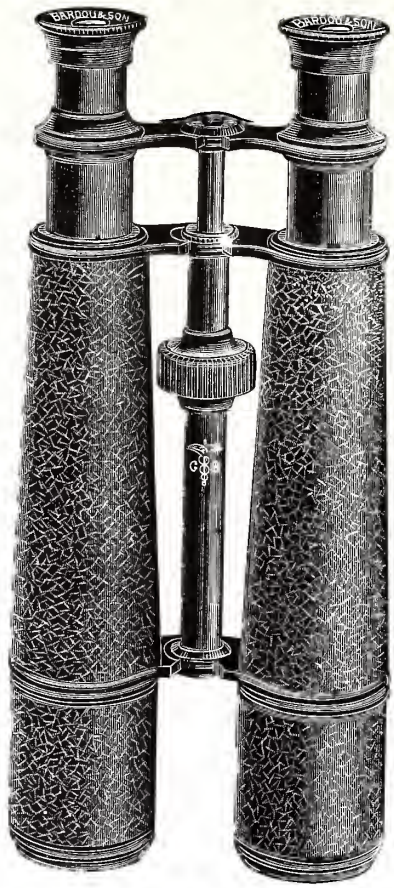
J. C. Abel Makes Recruits

In our account of the Springfield convention, held last August, we stated that at one of the sessions appeals were made by the National secretary, Mr. Chas. J. Columbus, and Mr. J. C. Abel, for photographers present to join the National Association. In a letter addressed to Photo-Era, dated October 5, Mr. Abel states that his efforts resulted in a total of 59 accessions to the P. A. A., which represents the same number of recruits gained at Cedar Point and at Minneapolis. We gave the result of Mr. Abel's activity at only one session, and had not the least intention to detract from the striking and effective work done by our *confrère*. All honor to him where honor belongs!

Joy for Two

The usher: "What's this?"

The spectator: "It's a photograph of a bunch of orchids. Please hand it to the soubrette when she makes her bow on the screen. Here's a picture of a dime for you."—*Philadelphia Bulletin.*



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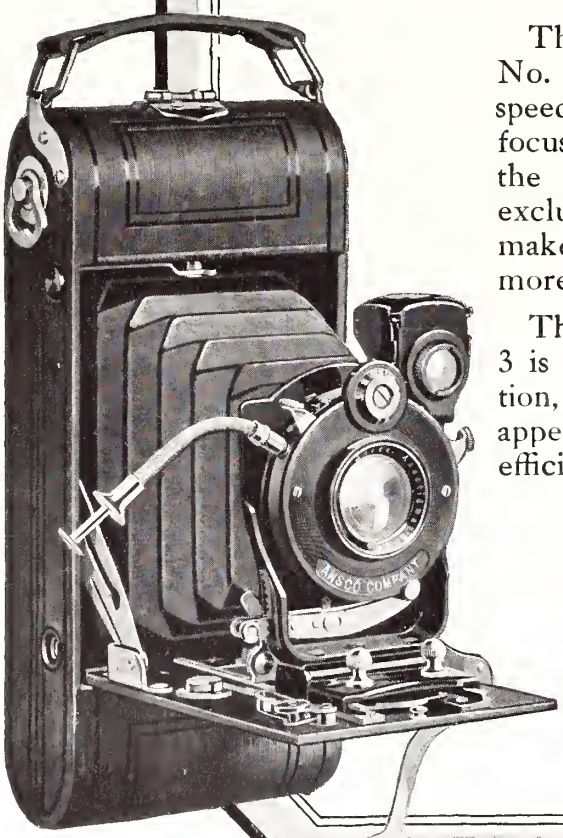

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"Within the crib that stands beside my bed,
A little form in sweet abandon lies.
And as I bend above with misty eyes,
I know how Mary's heart was comforted."

ANNE P. L. FIELD.

MOTHER AND CHILD
W. B. POYNTER

PHOTO-ERA

The American Journal of Photography

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Vol. XLI DECEMBER, 1918 No. 6

Niépce and Daguerre

Third of the "Professor Pyro" Talks

MICHAEL GROSS

"NO doubt you have all heard the story of the negro who was chased by a ghost," began Professor Pyro as he opened his third talk on the evolution of photography. "If you remember, the poor man ran until exhausted and then sat down on a rock, the ghost taking a seat beside him.

"'That was quite a run we had,' the ghost finally said with a smile.

"'Maybe you think so,' gasped the negro, 'but it ain't nothin' like the run we're *going* to have jes as soon as I catch mah breath.'

"In much the same manner, you may think that in my previous two talks you have been given quite a run—going from India to Rome, from Rome to Italy, and from Italy to England—but, like the colored gentleman, it isn't anything like the run we're going to have just as soon as *I* catch my breath.

"Our first stop on this third trip will be France. The year is 1814 and we seek a man named Joseph Nicephore Niépce. We do not know much about his early life except that he studied for the priesthood but finally became a soldier, surely an illuminating commentary on the sort of an individual that he was. Niépce had heard of the discovery of lithography, a process of printing from stone, invented by Alois Senefelder in Germany, and he set out to find some way to copy a design upon stone through the camera, instead of drawing it laboriously by hand. However, like our ancient friend Fabricius, who, if you recollect, discovered the properties of nitrate of silver while searching for something entirely different, Niépce, in seeking a way to copy a design upon stone, stumbled, instead, upon a way to produce photographs.

"After thirteen years of striving to find a medium that would reproduce a complete design, Niépce, in the year 1827, went to Kew, where he began a series of photographic experiments. His method, at this time, was to coat metal-plates with a varnish of bitumen dissolved in oil of lavender. When the plates were dry, he exposed them and then developed the image by the solvent in which the bitumen had been dissolved. This gave him a plate with the design in bare metal on a varnish-ground. These plates required about twelve hours' exposure and some of the pictures made on them must have defied all laws of Nature, for the shadows undoubtedly were shown as coming from both sides, the source of light having shifted from left to right while the scene was being impressed upon the plate. Despite the long exposure necessary to use his process, we must give Niépce credit for having produced the first real photographic plate. In addition to this honor, he is also entitled to the one of having used the first camera. In a letter to his nephew, written in 1816, he describes this camera as a box about six-inches square, furnished with a shifting-board carrying a lens.

"Finally, at least twelve years before the publication of the details of any other photographic process, Niépce concluded his experiments, calling his finished discovery 'Heliography.' As finally evolved, the process consisted of a highly-polished metal-plate coated with asphaltum. The image was developed with one part of oil of lavender and ten parts white petroleum.

"Having followed Niépce to the end of his task, we find it necessary now to leave Kew and to go back to Paris, where we make the acquaintance of a gentleman bearing the name of Daguerre, Louis Jacques Mandé Daguerre, to be exact, a scenic painter of note and the inventor of the Diorama, a series of painted pictures so constructed that one appeared to dissolve into

the other. As an aid to design his scenes, Daguerre had been in the habit of using the camera obscura and (I can see by your smiles that you know what is coming) he was soon attacked by the same 'fix-the-image problem' that had confronted our friend Fox Talbot. But it was no mild interest which Daguerre displayed. So deeply was he interested, in fact, that his wife thought that he had gone out of his head; and appealed to friends to save him from his mania of locking himself up for days at a time, in a darkened room that he had fitted up at his home. This was in the year 1824, at which time, please remember, Nièpce had already been experimenting for ten years along the lines of producing an image on a lithographic stone by means of some artificial process.

"Three years after Daguerre began to experiment, he heard of the work Nièpce was doing and wrote asking him for details. Nièpce, under the impression that Daguerre was a mere curiosity-seeker, did not answer the letter. Daguerre wrote again and again, and finally, the two men met. They exchanged experiences and finally decided to conduct their experiments together. For the benefit of those who are in favor of accrediting Daguerre with the entire discovery of photography, I might mention in passing that the opening paragraph in the original agreement drawn up between the two experimenters reads: 'A partnership has been entered into, under the title Nièpce-Daguerre, in order to elaborate a process invented by Nièpce and improved by Daguerre.' The wording of this sentence proves conclusively that Daguerre granted to Nièpce all credit for the original invention of photography. The Nièpce-Daguerre merger stayed in existence until the time of Nièpce's death in 1833, when Isidore, Nièpce's son, took the place of his father. Six years after the death of Nièpce the elder, Daguerre announced that he had found a practical and efficient method to produce photographs—a process entirely different from that discovered by Nièpce. In this announcement he omits all mention of his partner and claims for himself all credit for the invention.

"According to Daguerre's explanation of his discovery, he seems to have coated some silver-plates with iodide and exposed them in the camera. However, no image appeared on them, and he threw the plates into a rubbish-box. A few days later, on looking for these very plates to repolish them, he was dumfounded to discover that a photographic image had been developed on each one. As the rubbish-box was filled with all kinds of chemicals, it was necessary to take out one at a time and test its power to develop an image, in order to find the medium that had caused the change in the plates. The last chemical he removed from the box proved to be the agent that had worked the wonder—mercury.

"The version I have just given you is only one of the many that have drifted down to us from those early days. According to some authorities, it was in a closet filled with chemicals that Daguerre found his plates had developed; still others claim that Daguerre accidentally left a silver-spoon on a metal-plate, and, on lifting the spoon, found its image clearly and sharply defined. The first story seems to me to be the most logical one; but I am giving you all three versions for what they may be worth.

"Regardless of how the discovery came about, the fact remains that in January, 1839, Daguerre announced his discovery of photography. The process was communicated to the Paris Academy of Science by Dominique François Arago, a French deputy whom Daguerre had succeeded in interesting in his work, and on Arago's recommendation Daguerre was given a pension for his discovery. But—and mark this well—in announcing his great discovery, Daguerre made no mention of Nièpce. In addition to granting Daguerre a pension of six thousand francs a year for life, France also granted a pension of four thousand francs to Isidore Nièpce, the son of Daguerre's partner, for both his and his father's contributions to the discovery. France —with the generosity and nobleness which we have come to know so well—instead of granting a patent to Daguerre, announced through her deputies that 'France has adopted this discovery and is proud to present it as a gift to the whole world. The process is not secured by patents of any kind; when it is made known, anyone, anywhere, may profit by it.'

"An interesting sidelight on the character of Daguerre can be gleaned from the fact that, after France had granted him a pension to make his secret known—the only condition imposed being that he would not patent the invention but let it be given to the world—Daguerre, in 1840, went to England and there took out a patent covering his process. Another peculiar circumstance in connection with Daguerre's discovery was that, before ceding his invention to the state, he had endeavored to float stock to get sufficient capital with which to start a company. However, the French people would not subscribe to the undertaking, in the fear that were photography adopted universally, it would have the immediate effect of throwing all the draughtsmen in the country out of work.

"And now, while I am on the subject, let me tell you briefly of what a daguerreotype is; how



MID-WINTER WILLIAM T. STARR

it is exposed, developed, fixed and finished. A daguerreotype is an image formed by mercury-vapor upon a silver-coated copper-plate. It is a direct positive, produced by a single process straight from the camera, and no prints can be made from the finished plate. At the time Daguerre presented his invention to the French government, twenty minutes were required to obtain an impression. The first daguerreotypes were so delicate that the slightest touch of a finger was sufficient to mar the surface and, when exposed to air, they deteriorated rapidly. However, this defect was soon remedied by the discovery of M. Fizeau, who found a method to gild the image by means of a mixture of gold and hyposulphite of soda.

"Daguerre developed his first plates by the vapor of heated mercury and fixed them in a strong solution of common salt, which dissolved and washed away the iodide of silver that had not been acted on by the light. Following Herschel's discovery of the properties of Hyposulphite of Soda, Daguerre adopted this chemical as a fixing-agent. The first stage in the making of a daguerreotype was to polish and buff the silver-coated copper-plate. The plate was now coated in a coating-box with the vapors of iodine and afterwards exposed to chlorine and bromine. The exposure was then made in the camera. To develop the image the plate was exposed to the fumes of heated mercury. Hypo was used to remove the iodine, leaving on the plate the mercury, which formed the image. The plate was now gilded by precipitating a film of gold over the surface and then the daguerreotype was colored, set in a frame, and was ready to be delivered to the sitter.

"In my next talk," Professor Pyro concluded, "I will give you a few impressions of the early days of the daguerreotype in the United States, and then we will go on to the next step in the evolution of photography."

The Reticulation of Gelatine

S. E. SHEPPARD and F. A. ELLIOTT

THE reticulation of the surface of negatives is often a source of trouble to photographic workers. This trouble is most likely to occur in hot weather and is generally produced after fixation either during or just subsequent to washing. The wet gelatine layer becomes more or less finely wrinkled or corrugated, the network of puckers forming a pattern, generally extending over the whole of the negative, but sometimes only over part of it.



FIGURE I



FIGURE II

As will be seen from the illustrations (Figs. I, II, III) the "grain" of the network may vary considerably from very coarse dimensions down to very fine and even microscopic dimensions. This reticulation persists with only slight modification after drying. At the same time, as will be seen from the figures, if it occurs on a developed plate, the silver deposit undergoes a redistribution along with the reticulation of the gelatine, accumulating in the raised portions and diminishing or vanishing in the valleys between.

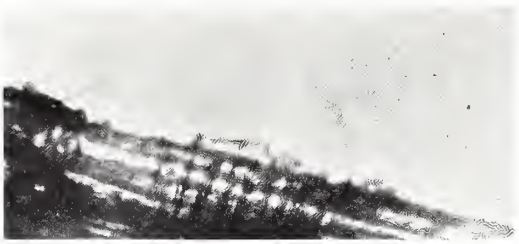


FIGURE III

This reticulation has been utilized in some photomechanical processes; thus it is by the reticulation of gelatine that the "grain" of a collotype plate is produced. It has been employed in the production of irregularly grained "halftone" screens, in which the reticulation pattern takes the place of the cross-line rulings of the regular screens.

An understanding of the conditions that affect and determine reticulation will not only be of practical use, but will tend to throw light upon the physicochemical nature of gelatine and, perhaps, help toward the scientific specification of gelatines for photographic use.

The Swelling of Gelatine in Water and its Shrinkage on Drying

The immediate cause and mechanism of reticulation will be best understood if we first consider a few facts on the normal swelling and shrinkage of photographic gelatine film which takes place in this treatment and use.

There are two aspects to this. In one we have only to consider change of mass or bulk; in the other change of shape. As to the first, any piece of gelatine placed in water within a temperature range of roughly 0° 20° C. swells—at first rapidly, then more slowly and finally reaches a limit. Fig. IV shows the curve of this swelling, plotted against the time.

The limit attained not only depends upon the temperature, but upon the character of the gelatine, and, to a very marked extent, upon the presence of foreign substances, especially electrolytes, in the water. Acid and alkali in particular have a very great influence upon the swelling, as will be seen from the curve (Fig. V) which shows results actually obtained with a sample of gelatine. In this curve, the ordinates give the amount of water adsorbed by 1 gram of air-dry gelatine on final swelling (about 48 hours) whereas the abscissæ give concentrations of acid and alkali in normality. As is evident, the swelling or adsorption of water is extremely sensitive to both acid and alkali or, in terms of the ionic theory, to hydrogen and hydroxylions. In fact, the actual sensibility is of the same order as that of the dyes used as analytical indicators. The minimum adsorption probably lies in reality at a point represented by the dissociation of pure water, according to the equilibrium $H^+ + OH^- = H_2O$; but this is masked, usually, by residual acidity or alkalinity of the gelatine. The precise determination of this point for a given gelatine will probably prove of some importance in the specification of photographic gelatines. It is of great interest, since in passing from an alkaline to an acid state, the swelling goes through a very pronounced minimum.

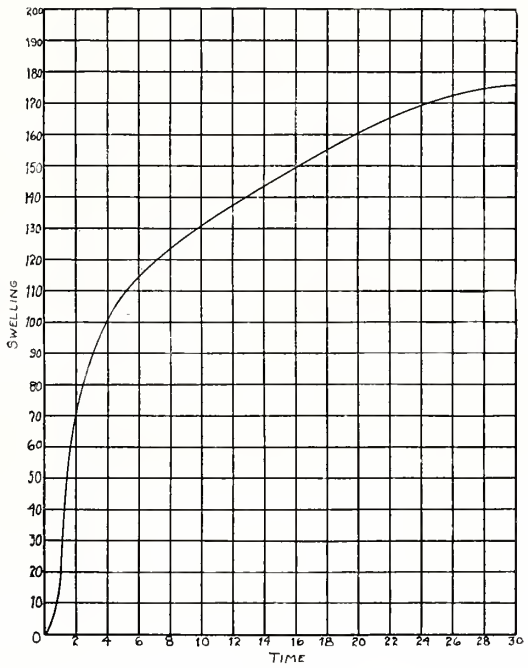


FIGURE IV

The influence of neutral salts in solution upon swelling is too complex to be discussed fully. It will be sufficient to note that some, such as iodides, act in the direction of increasing the swelling (hydration); others, as sulphates, in the sense of diminishing it. So long as only salts of the alkali metals and ammonia are considered, it is the acid part or ion which is of chief importance and these salts have been arranged in a series, indicating their effect upon swelling. The effect of a given salt depends much upon its concentration and, above all, on the acidity or alkalinity of the solution.

Now, turning to the influence of shape upon swelling (and conversely) we find here that a dominant factor is that of the condition in which the gelatine first swelled or was cast and dried. Gelatine, in the abstract, as a homogeneous material alike in all directions, should, theoretically, tend to swell or shrink uniformly without change of shape, only altering its mass or bulk. If gelatine could be dried very slowly so that the loss of moisture proceeded at the same rate in all parts of the mass, then it would shrink without change of shape; but such a condition cannot be realized in practice and gelatine dries more rapidly on the surface than in the interior, thus producing stresses and distortion. In the case particularly important to us, the gelatine is coated on glass or

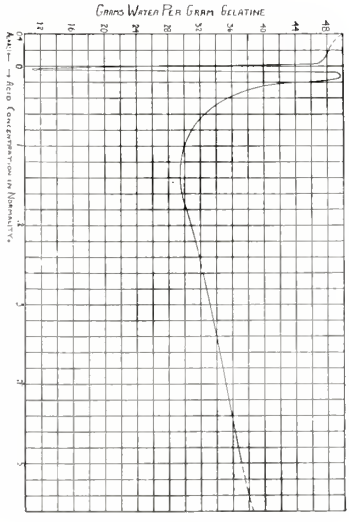


FIGURE V

film support and attached firmly to it, so that one side is eliminated as regards drying, etc. The gelatine cannot spread off the plate, so that its swelling and shrinkage are limited to one direction, viz., that perpendicular to the plane of the support (cf. Fig. VI). This state of

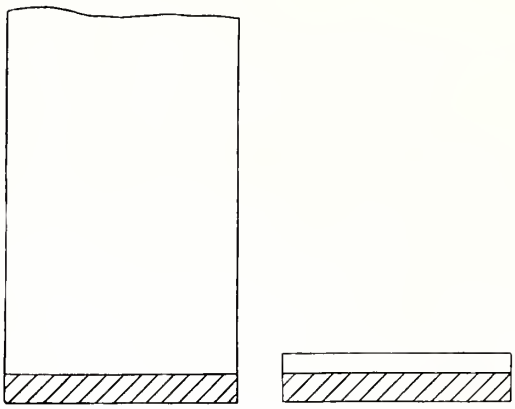


FIGURE VI

affairs is determined, in advance, by the first drying down of the jelly (or emulsion) on the support; it is not peculiar to the photographic film, since ordinary sheet or leaf gelatine which has been dried on nets shows the same tendency to have its principal expansion perpendicular to the face of the sheet.

The Production of Reticulation

A gelatine film, under normal conditions, can be swollen and dried repeatedly without losing its capacity to swell and shrink normally to the plate. It is evident that a certain strain must be imposed upon the gelatine in drying, which is removed by swelling. If we consider an ideal unit cube of the swelling gelatine, supposed free of all constraint, it would tend to expand uniformly in all directions. This ideally uniform expansion corresponds to a uniform swelling-pressure, *i.e.*, a pressure the same in all directions. We can consider this resolved into forces perpendicular to the surface, and forces parallel to the surface. Actually, the gelatine layer in sheets or on plates does not swell uniformly. The forces parallel to the surface—which would, of course, tend to remove the film from the glass or support—must be compensated. This compensation is in a measure external or initially external, being due to the adhesion of the gelatine to a rigid support; but it is chiefly internal, arising from a uniform strain or tension impressed by the mode of drying.

Now suppose the gelatine layer be subjected to drastic internal action, excessive swelling and excessive dehydration, either successively, or in a measure, simultaneously; then gelatine jelly will be strained beyond its elastic limit, showing either a total or a partial reaction.

Total reaction would imply the detachment of the layer from its support, a result which is seen in frilling and floating off, as a result of excessive lateral expansion.

If, however, the adhesion to the support is maintained, but the newly disengaged tangential or lateral forces are not entirely compensated, then the strain distribution in the gelatine layer ceases to be uniform and we get a local puckering or folding, similar in character to that produced in the earth's surface by tangential forces acting on restricted areas of semi-liquid igneous rocks.

Thus the immediate mechanism of reticulation is the production of restricted tangential dilation, which is partly arrested.

This, however, leaves unsettled the inner physical chemistry of the process, that is, the origin of an excess swelling-pressure (the super-pressure) and of a partial or localized arrest of this. This can be discussed best in dealing with specific cases of the production of reticulation.

Experimental Production of Reticulation

A typical case, which has the advantage of following ordinary photographic procedure, is as follows: A Seed 23 plate is "flashed," developed in a standard pyro-soda developer for 4 minutes at 80° F., then rinsed and fixed in a standard hypobisulphite fixing-bath at 80° F. Reticulation was then found to depend upon the temperature of the wash water as follows:

Temperature	*Reticulation*
70° F.	None
80° F.	None
90° F.	Faint
100° F.	Strong

Instead of water, stronger and more definite results were obtained by an after-treatment with the following solution:—

50 cc.	95% Ethyl alcohol
40 cc.	5% Formaldehyde
110 cc.	Water

In this case the following factors may have played a part:

(1) Prehardened gelatine in the emulsion.

(2) Tanning agents produced in development.

(3) Excess swelling-pressure in hot developer, etc., and particularly in washing.

That reticulation can be produced by the combined action of both a swelling or softening agent and a hardening or anti-swelling agent to restrain this, is shown by the production of reticulation by the following combinations:—

No.	*Hardening-Agent*	*Softening-Agent*
1.	Tannic acid	Acetic acid
2.	Quinone	Acetic acid
3.	Chromic acid	Hot water
4.	Mercuric iodide	Potassium iodide

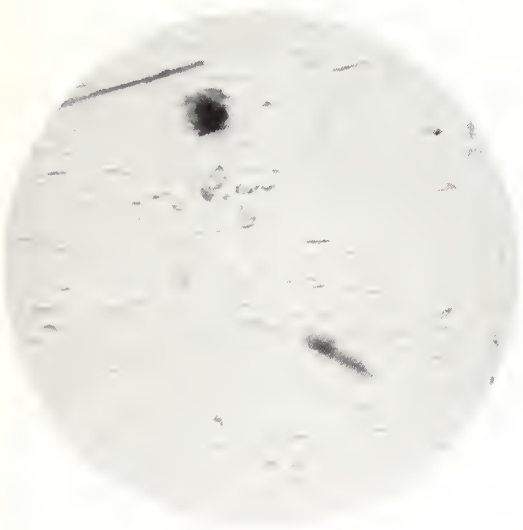


FIGURE VII

All of these combinations produce reticulation; but (1) and (2) have only a theoretical interest, as they are difficult to control. The other two pairs are more susceptible of control; although it must be emphasized that in any case the balance between hardening and softening agents must be delicately adjusted, and that the measure of control is limited. Further, the occurrence or production of reticulation is in a very large degree dependent upon the nature of the gelatine. The so-called "hard" gelatines tend readily to reticulation, whereas the "soft" ones only give transient signs of it.

An experiment on this point gave the following results:—

Gelatine	*Coating*	*Reticulation in potassium mercuric iodide*
A Hard	8%	Strong, permanent
B Hard	8%	Strong
C Soft	8%	Very faint trans.
D Soft	8%	Same
E Soft	8%	Same

The following results were obtained with combinations of softening and hardening agents (3) and (4).

Chromic Acid and Hot Water

Chromic acid is of course a well-known hardening-agent for biological tissues. Working with 8% Hard gelatine machine coated on glass, a 10% solution of chromic acid at 20–22° C. followed by washing with water at 56° C. were found to afford the best conditions.

Potassium Mercuric Iodide

The solution of mercuric iodide in potassium iodide known as Brücke's reagent was found to be a convenient strength for use. According to the formula for this, 120 gms. of mercuric iodide are to be dissolved in a solution of 50 gms. potassium iodide in 500 cc. water, and the whole diluted to 1000 cc. We found, however, that in these circumstances only about 72.6 gms. of mercuric iodide could be dissolved at room-temperature, nor was this result much affected by heating to 50° C. It should be noticed that these quantities are near to those necessary for the double salt 2 K I Hg I_2 or K_2 Hg I_4. In this combination, the softening-agent is the iodide, or more specifically the iodion I, whereas the hardening or coagulating agent is the mercuric salt, or, again, the mercuric ion Hg ++. Attempts made to increase the proportion of mercury were without success. A saturated solution of potassium iodide at 18°–20° C. was made, containing 128 gms. potassium iodide to 100 cc. of water, or 56.2 gms. in 100 gms. solution,

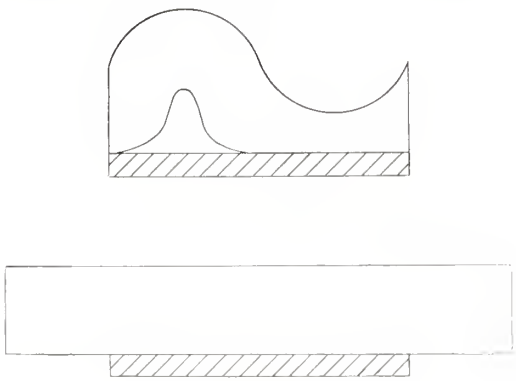


FIGURE VIII

which agrees fairly with the value of 59% at 20° C. given as the solubility in Landolt-Börstein. This solution was saturated at 20° C. with mer-

curic iodide, taking up 64 gms. In this the ratio of 2 K I to Hg I_2 is .69, whereas the actual double salt would call for .73. This solution was used as a saturated stock solution and Brücke's reagent is equivalent to 10 parts stock saturated plus 90 parts water.

Working with the 10% saturated (= Brücke's reagent) and Hard gelatine 8% machine coated, the following results were obtained.

Duration of Treatment	*Effect*
$2^3/_4$ minutes	Smallpox-marks about 1 mm. apart produced in 40 seconds followed by reticulation which was much lessened in drying.
$3^1/_2$ minutes	As before, but reticulation somewhat more persistent on drying.
5 minutes	As before, but with continued treatment reticulation became fainter and vanished on drying.
10 minutes	As before, but the whole surface finally softened and could not be dried, softening and running.
10 minutes	After treatment this was chilled 15 minutes on ice, then immersed for two minutes in 3% formaldehyde, this conserved the reticulation.

The formaldehyde after-treatment seems generally necessary with this agent to "fix" the reticulation. Using Soft gelatine, 6% solution machine coated, and a wide range of concentration of the potassium mercuric iodide solutions, only slight and transitory reticulations were observed in the higher concentrations, giving way, however, to a general softening and liquefaction. Attempts to overcome this by preliminary hardening with formaldehyde were not successful. Prehardening with chrome alum showed better results. In the case of the mercury potassium iodide combination—while it is not possible to increase the mercuric iodide ratio above a certain limit—other permanent or temporary hardeners may be added. In particular, it was found that Brücke's reagent with the addition of 6% of saturated Na_2 SO_4 solution gave very fine, uniform reticulation.

Sodium sulphate used in the reticulating process makes the "grain" finer, whereas after-treatment with formaldehyde increases or conserves the depth of the wrinkles.

An important conclusion from these experiments is that apparently reticulation may start in more than one way. Thus with Brücke's reagent, and with chromic acid followed by hot water, reticulation proper was generally preceded by the appearance of smallpox-like markings of about .2 to .3 mm. diameter, these would sometimes align themselves in "streaks," and in any case seemed the foci of the subsequent reticulation. These markings are shown in Fig. VII. On the other hand, in the reticulation produced by the use of hot water after development and fixation, these initial markings did not appear.

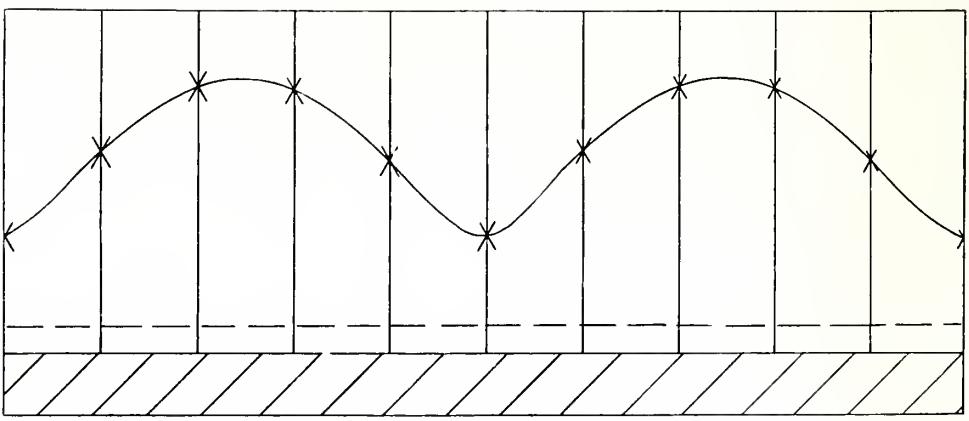


FIGURE IX

Effect on the Silver Image

It is noteworthy that when the reticulating film contains developed silver particles—as in

negatives after fixation—there is an apparent migration of the silver particles, the ridges being denser, the valleys much less dense or even quite clear.

The question arises, whether reticulation is simply a puckering of a sheet grown larger by lateral dilation, larger than the support boundaries, but retained on this by local adhesion, ily with the fact, already noticed, that in many cases reticulation starts from a number of isolated points. When a combination of softening and tanning agents are present together in a gelatine gel, a certain amount of selective adsorption and differential diffusion will occur. A molecule or ion having a tanning action will tend to be adsorbed or fixed in situ, and its own specific

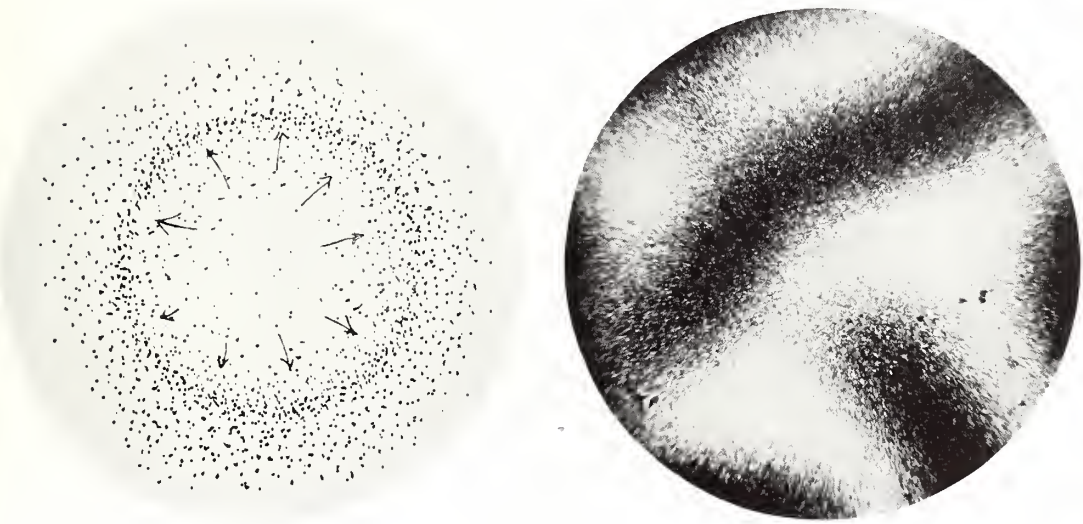


FIGURE X

particularly at the edges, as is indicated in Fig. VIII, or is a mosaic-like alternation of hardening and softening effects, the ridges being more swollen, the valleys more tanned; as suggested by Fig. IX.

It is evident that in the first case the excess in the ridges is simply due to the total thinning (by the lateral dilation) plus local thickening due to folding of the increasing sheet. In the other case, the greater density in the ridges would be due to an actual migration of silver due to tension, similar to that occurring on the drying of moisture-spots, when the tension in drying softens the gelatine and forces the particles into the periphery of the spot. This effect is shown in Fig. X, a drawing made by Mr. M. B. Hodgson from microscopical observations. In the latter case, we should have in reticulation a great and increasing number of microscopic replicas of such "moisture-spots," tending to run into each other and form one system, like cracks in a drying mass.

The theory of alternate softening and hardening, or of differential swelling, couples up readdiffusion will be hindered. Molecules or ions having a softening action may modify the action on tanning-agents, but their own diffusion will be facilitated by their hydrating and softening action on the gelatine.

It is easy to see that we should have then a condition of rhythmic coagulation of the gelatine very similar to that shown to the well-known Liesegang rings. In this latter case, when two salts which react to form a precipitate are allowed to diffuse together through a gelatine gel, the precipitate, such as silver chromate or silver halide, is not deposited uniformly, but rhythmically, in alternate rings or layers.

Actually it is observed that reticulation generally starts in one or more regions and fills up by the spread of these; in some cases from isolated foci. It seems then that reticulation in its earliest stage involves something like the nucleation of a crystallizing solution. In such a solution, crystallization may start either at nuclei already present in the solution or by the formation of new ones; but in the latter case, there is required a

higher degree of super-saturation for crystallization to start. At what points in such solution or melt the first nuclei appear, is a matter of pure chance and it is apparently much the same with the start of reticulation.

The Connection between Reticulation and the "Graininess" of Negatives

In one important case where it is very probable that incipient reticulation is at work, foreign nuclei are available. This is in the case of the ordinary development of a photo-emulsion.

It is known that, apart from differences in emulsion, different developing-agents and treatments affect the "graininess" of the developed image. By this it is not to be understood the elementary plate-grain, but such clumping in second order aggregates as is liable to be objectionable in projection. This granulation depends upon development, and in the same way, resolving power depends upon development and the developer. (Cf. K. Huse: Photographic Resolving-Power, *Jour. Amer. Optical Soc.*, I, p. 119, 1918.) It is hardly to be doubted that we have in this case a selective adsorption and differential diffusion of development, producing what amounts to incipient reticulation, nuclei being formed by the developed silver particles, with their tendency to adsorb the colloidal reaction-products of development, which have tanning or coagulating properties. Consideration of the great change in the swelling equilibrium shown on passing from an alkaline to an acid condition (cf. Fig. V) shows also that the operations subsequent to development are very apt to develop still further any sub-microscopic reticulation, and again to coarsen the "grain" of the image. It is hoped to follow this up experimentally when time permits, instruments having been devised for measuring both granularity and minute swellings.

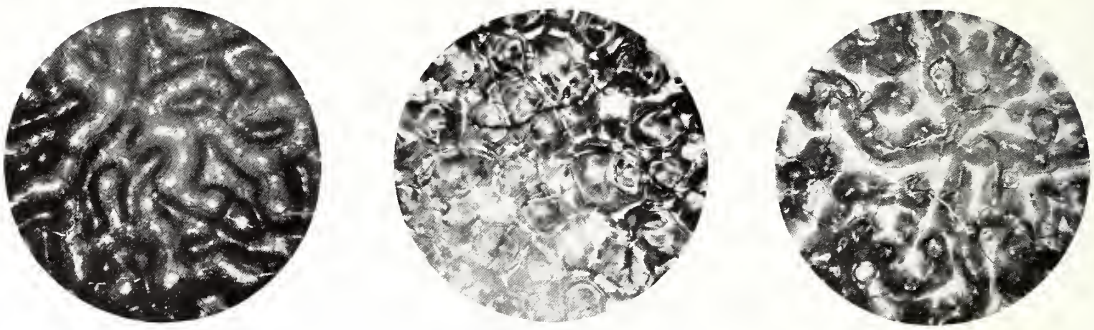
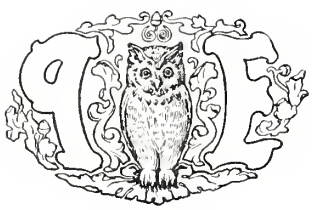


FIGURE XI

In Fig. XI are given photomicrographs of some of the reticulated preparations described, taken with vertical illumination at 100 diameters. [Communication No. 71 from the Research Laboratory of the Eastman Kodak Company.]



A Filing-Card for Photographic Prints

D. F. JONES

WHERE photographs are used for constant reference and where prints are required on short notice, there is an imperative need of some simple system of filing prints which permits each subject to be classified properly and accompanied by adequate description and other necessary details. Having failed to find anything on the market which answered all these purposes, I designed the filing-card shown herewith, and it has proved to be so satisfactory that a brief description is given in the hope that it may be of value to others.



FIGURE I



FIGURE II

The card is made for 5 x 7 prints, but can be adapted to any size. Squares of stiff, white cardboard and 8 x 8 inches in size are obtained cut to order. Triangular pieces of the same material are made by cutting 2 x 2-inch squares diagonally in half and these pieces are pasted on two corners of the large card and two inches below the opposite corners, as shown in the accompanying examples. Library-paste is applied thinly to about one quarter of an inch along the two sides of the right angle of the triangular piece of cardboard, leaving the diagonal unpasted in order to slip underneath the corners of the prints. The triangular pieces are cut easily on a photograph-trimmer and are pasted on quickly, after a little practice. When finished, the cards are weighted down or put into a press to fasten the pasted strips on firmly.

This card has the following features which should recommend it to anyone who has had filing-difficulties.

1. Both vertical and horizontal compositions can be filed together in their proper positions.

2. From one to a half dozen prints from the same negative can be inserted in each card.

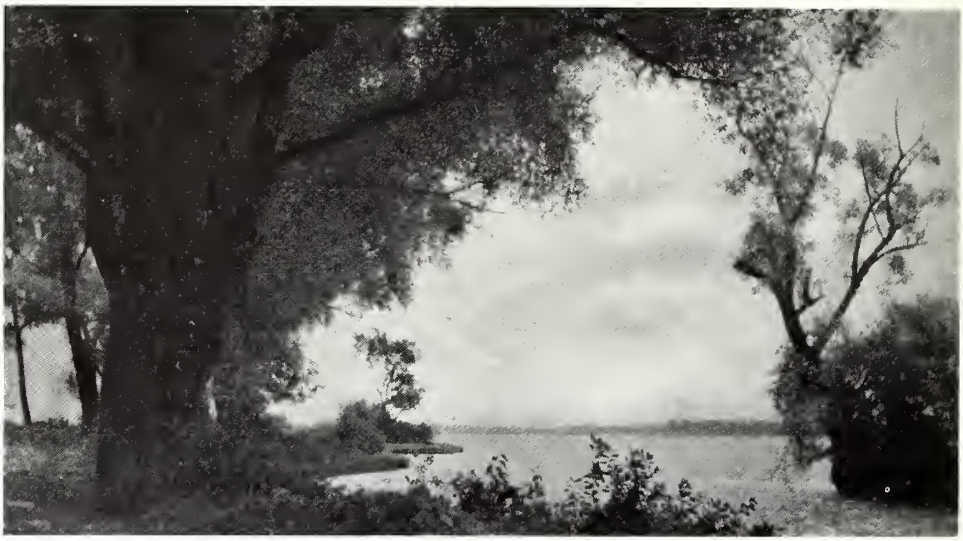
3. Space is provided for the negative-number, the date, description of subject and any other necessary and important data.

4. Prints can be taken out or inserted easily and they are entirely unmarked themselves.

5. Smaller-sized prints can be accommodated in the same system by placing the triangular strips at suitable distances apart.

6. The cards can be classified quickly according to either number or subject. This is not possible in the many types of albums on the market.

The arrangement to hold photographic prints here described, doubtless has little value for the amateur photographer; but the camera is now such an important factor in classified knowledge in many branches of investigation and in so many professions and industries, that some adequate system of filing photographs is absolutely essential.



NIAGARA RIVER H. A. BRODINE

Pictorial Printing

H. A. BRODINE

WHEN one has been an active amateur photographer for two or three years, and has read eagerly numerous dissertations on art and various ways to produce artistic photographic work, the time comes when a more flexible printing-medium than ordinary developing-paper is desired. With developing-paper, only black and white or sepias of uncertain tone are possible unless one resorts to various more or less tricky toning-baths such as uranium, copper and other compounds. Most of the tones obtained with these baths are not permanent and have never been very popular. With a modified developer and over-exposure, many fine tones may be had on developing-paper by direct development; but this is an exact science and the results are not always those one looks for. So it seems that if one has not time to experiment and try out all these methods of obtaining other than black and white or sepia developing-paper prints he must resort to carbon or gum printing to obtain other tones. Platinum-printing allowed of many toning-methods and fine results were to be obtained, but the price of platinum paper and also the uncertainty of operation worked against the popular use of it for other than black and white or sepia prints. So it seems to narrow down to a question of either carbon- or gum-printing, and I am greatly in favor of carbon-printing. The cost of working in gum is cheaper, print for print, than that of carbon; but the results in carbon are more certain and the process is not nearly so messy or difficult. I have anything but pleasant reminders of my experiments in gum-printing and strongly advise against the process, unless one has a penchant for experimenting.

There is one other home-made printing-paper of which one worker in particular has written much, and never having two formulas alike. It is Kallitype, and it requires more skill than the average amateur possesses contrary to all that has been published. I have made many experiments with this process and my trouble has been that in working for a flat black and white according to directions I have always obtained a sepia print of a contrasty, solarized nature. Perhaps, in other hands, Kallitype may yield results superior to mine. It all seems to rest in the quality of the iron salts on which so much stress is laid, whether good results are obtained. Possibly



INDUSTRY, PITTSBURGH
H. A. BRODINE



FROM GOAT ISLAND H. A. BRODINE

that has been my trouble. If the process can be worked with any certainty, I think that it should prove a very desirable one from an artistic and economical point of view. I would be glad to work the process myself if I could be sure to get the effects I desire, as it would enable me to make prints with a wide margin suitable for plate-sunk effects. This is also possible in gum-printing if care is exercised; but I have had trouble to clear the whites in my Kallitype prints with the result that the unexposed coating was not eliminated by the processes of developing and fixing, leaving a yellow stain.

The objections to carbon-printing are several; but not one of them is serious. In fact, it is really a simple process if any degree of care is used. When I consider the results of my first trial at carbon-printing, in 1907, I have confidence in asserting that it is as simple to work after the first trial as any printing-medium. It is, of course, necessary to sensitize the carbon tissue; but that, too, is simplicity itself. For the amateur, who uses films, single-transfer carbon-printing is all that is necessary. When printing portraits or other views in which it is necessary to show things in their proper relation one may print with the film-side away from the sensitive surface of the tissue. In landscape or marine work from plates or films, this is not necessary. After sensitizing the carbon tissue, it is dried and exposed under the negative to daylight and it will be found on trial that an exposure equal to the time required



CENTRAL PARK, NEW YORK — H. A. BRODINE

to print a light proof on folio paper will be ample. After exposure the tissue is immersed in water of ordinary temperature and brought into contact with a sheet of single-transfer paper or any other suitable stock and then placed under weight for 20 to 30 minutes. After this period, the entire print is then immersed in lukewarm water and the temperature gradually increased until the pigment begins to ooze out from the edges of the tissue. At this point, the backing of the carbon tissue may be stripped off leaving a dark mass on the final support. The print is then placed on a sheet of glass and warm water gently laved over it until the unaltered pigment is washed away, after which a print in pure pigment is the result the stability of which is virtually beyond question. Immersion in a solution of alum, and washing completes the process, and prints are then dried by hanging with clips.

In Elfland with a Camera

EDWARD LEE HARRISON

IMAGINATION! Kindly weaver of dreams! How many weary hours have been beguiled by thy cunning tales! Without thy kindly deception where were our childhood! What of Aladdin and his jewels, Sinbad the wonderful, and the endless procession of gnomes and fairies which trailed like a bright colored ribbon through all our youthful years?

And then a little further on, comes Captain Kidd, the Jungle Folk of Kipling, Bandits, Cavalieros and Knights, which tramp grotesquely or pompously past our marveling gaze.

Were they not real? Who shall say that they were not wholesome diet for our budding minds? And shall we then lay aside all the glamor of youth when we grow up and enter the serious work of life? Shall we dream no more dreams—see no more visions, and commune no more with the changeful mistress of fable? If we thus allow

our work to lack its chief and most potent stimulant, we will deserve the failure we shall reap.

Come then with me, and we will stroll down yonder green glade together, and renew our youth with the dream-folk of the wild spaces. Yes, indeed, some of them still live in the cities; but to-day let us go where they are most at home, and—Yes, you may bring your vest-pocket camera—maybe the fairy folk won't notice it. No; you don't need a tripod. But you might put your ray-screen in your pocket.



CAVALIERS' PATH

EDWARD L. HARRISON

Step softly now—we are near the lake, and—yes, I am sure of it now—there is Oberon the Elf-King, waving his wand in graceful time to the music of two young larks. I think I got him that time—we'll roll the film and try again.

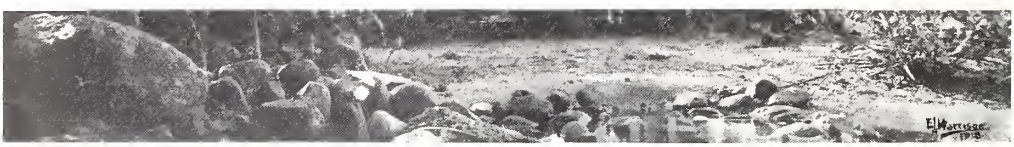
Puck generally comes out about this time and sits on that broad gray mushroom by the tree. There he is now—I'm sure I got him, and I saw two pixies swinging through the branches as I pushed the release; maybe they are in the picture, too. Let's hope that I was quick enough.

But look down that shady lane; see? There's a Saracen Prince and two Emirs, and the Nubian guard holds in chains a band of villainous corsairs. If I hadn't tripped over a root, I'd have got that. I know where the Little Old Man of the Mountain hides out. To-morrow we'll pay him a visit.

And then there's a fairy green about three miles from here I once visited; but I've lost the way. Maybe we can find it again. There was a band of gnomes had a forge there, and made all sorts of enchanted things from the gold dug in a magic subterranean mine; but a wicked magician broke the forge and they've gone to the court of Haroun-al-Rashid for protection.

Some folks say that no film made by human hands can take an imprint of the diminutive magic people. But at least the places they visit are mortal, and the dreams they conjure up are helpful. And if we can but approach the secret places where they hide with the lure of mystery, we may well see more artistic pictures and dream more gorgeous visions. And he who cannot dream cannot make artistic pictures.

Let us take off our hats to the elves. They are our staunch and everlasting friends.







THE GARDEN OF ALADDIN

"WE WERE TOO LATE FOR OBERON AND PUCK"

EDWARD LEE HARRISON

Photographic Preparedness

WINN W. DAVIDSON

HOW strangely it sometimes happens that the man who has devoted the most time and money and painstaking effort to the preparation of his photographic equipment is found to be absolutely unprepared when the call comes for sudden action. With what inward chagrin must he view the unthinking amateur clicking off his yards of film at the moving scenes that he himself was so much better prepared to record.

Prepared, and not prepared. But how about yourself? Suppose this very instant, or this morning or afternoon, you were called upon to photograph a great catastrophe, or make a last portrait of a dear one leaving for France, or make a flashlight or copy a print—are you ready? I don't mean in fifteen or twenty minutes, but right now before the flames die down or the train pulls out.

And I don't mean to-day only; but to-day—any day in the year as you are pulling on your shoes in the morning or stirring your coffee at the dinner-table. Just as it is every man's duty to keep himself fit, even so should it be the pride of the photographer that he is always ready. Imagine a man whose business requires that he measure time by the second—imagine such a man taking an appreciable fraction of an hour before he gets into action. Doesn't it happen?

I am in earnest about this, because it has happened with me, not only once, but again; and I wish I could say that I had never been caught twice in the same way. But I have; and so frequently does this particular kind of lightning strike in the same place, that I believe it can be analyzed and classified, and its action foretold with as much certainty as an eclipse of the sun or the appearance of a comet. Unlike an eclipse, however, it is possible to prevent it, and the purpose of this article is to show how.

It was not my original intention to speak of the pictures we have missed by not having a camera with us—the cause seemed too remote and unpreventable for any blame to attach to us, on that score. But the thought has occurred to me so many times, that I would have a handy little camera always with me wherever I went during the hours of daylight, that I am sure the same thought must have come to others. And the reward would have been so instant and so rich, that I cannot refrain from giving examples.

Photographic impossibilities, such as snapshots at dusk or scenes in the silvery moonlight are, of course, barred from my list of regrets. But imagine a vertical composition with a picturesquely hazy grouping of skyscrapers at the top; the swirling traffic of a sunlit street arranged to the best advantage for a background, and in the foreground a short iron standard bearing a white-disked "Safety-Zone." In front of this two of the daintiest, sweetest misses man ever set eyes on, both timid—one protectingly and the other trustingly—the taller slightly in advance with her face showing that she saw no opening through which to hurry her tiny charge to the safety of the sidewalk. As hand in hand and on tip-toe they leaned expectantly forward, they made a picture so delicate that it would make any nature-lover content with his confinement in a great city. And the scene lasted long enough to capture it, several times over. Can I excuse myself for not having that handy little camera with me?

Again: I stood after an April-shower by an opal-gray path running picturesquely up a grassy hillside. All around was a half-luminous gloom, and in the near distance a somber multitude of toilers poured forth from the great iron-works. And on the path in an aureole of mellow sunlight, with his back half toward me, a grimy worker clad in loosely-fitting rough clothes, with a battered hat and just the right touch of crude color in his red scarf; from one hand dangled his tin dinner-pail—too new, but glorified by some subtle quality of the light into perfectly wrought silver. And with each of his rough, soiled fists he held lightly, by her white hands, a dainty flower of a girl starched and clean with her freshly combed, flaxen braids. How the wet grass sparkled under their joyous feet! And the children's frocks, delicately checked with cool blue and soft pink, sang softly of the woman waiting. If the Fates shall spin that I become a painter, that is the picture I would paint.

There are tragic gloom and joyous light; there are the toil and the sorrow of life, and our happiness in the joys of our children. There are the struggle for food and clothing and the unthinking joy of living; there, too, are art and the beauties of Nature, and, permeating all, Love and Divine Providence. A picture, indeed, that would show the toil-weary a glimpse of their own glory. I saw it in color, of course; but it was there in monochrome as well: I saw it with only one girl in the picture and it lingered till the second girl caught up with them; and



YOUNG AMERICA
THERON W. KILMER, M.D.



AN AUTUMN-SOUVENIR ALICE E. SOUTHER

still it lingered as if waiting to be put on record by some lurking photographer. No; I cannot excuse the lack of the handy little camera.

And the little camera has the speed and the depth of focus to treat easily such scenes as demand careful focusing with an elaborate equipment. Happily, some one of my readers may have his camera along when he, in turn, sees his great picture.

The lack of preparedness that I had in mind at the outset, however, was of the sort that prevents a man getting a picture when he is right at home in the midst of all his photographic paraphernalia: and the causes of this that I have found may be due less to a lack of material and apparatus, than to a superabundance of those things. And they may sometimes be due rather to an excess of photographic knowledge than to a lack of knowledge of the essentials. All of which, you will observe, affords liberal encouragement to the beginner.

First and foremost among the causes that make me miss the "big picture," when it comes, is the moving-van. Not all of you may be troubled to the same degree as I have been; but a word of caution now may help you through the ordeal when it does come unexpectedly.

There are two aspects of this trouble. One before you move:—what is the use of fixing things right when you are going to move in a few weeks? How we do shun work that may turn out to be useless! and what a little effort it would take if we only got at it! What if we do move and lose the labor? At least, we were prepared for whatever might happen. Think of our boys in France digging the trenches they will abandon in a few short hours; and that is real labor. But what a satisfaction always to be ready!

And after we move, do we dig-in the first day and stop up all the light cracks in the new darkroom with black paper or building-paper? Do we tack strips of cloth around the edges of the door, dust the shelves, set up our lantern and trays and place our paper, plates, developer and hypo where we can get at them? You may wish you had, before the day is over.

I tore down, in a day, the darkroom that had been the slow growth of years, and I waited months to restore it to even better advantage in the new home. That dream of ultimate per-



THE OAKS AT WAYSIDE INN CHARLES S. OLCOTT

fection cost me dear, for through it I missed photographing the San Francisco fire and earthquake: the most striking views in the city were within a block or two of my home, and the weekly to which I would have sent my pictures held its presses, while a man in New York was sent for to cover the assignment.

If you need a darkroom, have it ready—always, or buy a film-camera and get the picture when it comes. A rough makeshift darkroom is still a darkroom; there is always time to perfect it later.

Enlarging-arrangements give the most trouble at such times. An enlargement is always the first thing that cries out to be made in a new home. Where daylight must be depended upon, and there is a window available with a suitable exposure, it need not take a great amount of time to tack a couple of yards of heavy building-paper across the opening. It is easier to putty up the tack-holes when you move, than to fit a wooden frame to the window; and all that is then left to do is to cut an opening for the back of the camera. A packing-case will do for an easel until you complete more elaborate arrangements. Tack an old thin sheet flat to the outside of the window-casing, if it is too much trouble to set up a reflector.

If no window is available and you can't cut a tiny hole in the basement-wall, a daylight-enlarger is a substitute that will solve the problem for all future moves, as it has the advantage of being portable. The only objection I have to this form of enlarger is that it does not readily allow one to shade parts of the enlargement during exposure.

Where there is electricity, an enlarging-lantern has all the convenience of portability, and allows

one to shade the print to his heart's content. I have enclosed a Parallax lamp in a typewriter box and fitted an old 5 x 8 view-camera permanently to an opening in the box; I expect this to solve my troubles, for some time to come. The camera was minus a back and a lens-board, and cost me only $1.25.

This suggests a way in which even the best prepared of us may at times miss a picture. A rush call comes when you have your regular camera snugly fitted into your enlarging-system—ground-glass removed and all the chinks of light carefully stopped up with rags. You must finish your enlarging and you must get the new negative. You lose either way, unless you have an extra camera for the enlarging; even a telescoping-box will do, if you are unwilling to undertake the making of a bellows.

Keep your regular outfit all together in a convenient place; not necessarily in the darkroom; nor in the living-room, either, where the temperature is not always as cool and uniform as might be desired for photographic emulsions. Then you will always be able to grab up camera, tripod, focusing-cloth, ray-filters, exposure-meter and plateholders at a moment's notice. This is also the place for extra lenses, lens-caps, flashlight material, tilting tripod-tops and other accessories dear to the heart of the confirmed camerist. I once had to get up before daylight and walk eight or ten miles for a picture that I could have gotten at my very door, if I had not waited to take down my focusing-cloth from the top of the darkroom-window where it was stopping a streak of light.

If you cannot count seconds accurately, a timing-clock is a handy thing to have; and if you have one, you are less likely to leave your watch at home beside the printing-light some time when you need it most. The place for your watch is in your pocket.

Sometimes, our state of unpreparedness results from having new or unfamiliar apparatus or material to deal with. Perhaps it is our first box of panchromatic plates, and we have an untried ray-filter to use with them; or, perhaps, it is the first time we ever used orthochromatic or anti-screen plates and we are apprehensive how they will act under our developing-light. So we decide to "let it go" rather than risk a poor result; the trial has to be made sometime, and why not now? It is of no use to ask why you haven't already done so. How many of us, in the excitement of setting off our first flashlight, have forgotten to draw the plateholder-slide? Or in changing from an automatic to a compound shutter, how many pictures have we lost by forgetting to set the shutter? And on first experience with an anastigmat lens, we have all figured that the remarkable speed of the lens would enable us to make a more rapid exposure even with the same diaphragm-opening we had formerly used! I can even remember the time when I discarded my fixed-focus box-camera for a 4 x 5 outfit with a bellows; I took a whole dozen exposures without once considering the necessity to consult the focusing-scale. Those pictures were considerably ahead of their time, judging by the standards of the modern soft-focus school.

The moral of it all is to make the time for a thorough trial of any new apparatus or material that we decide to acquire—there is no telling how soon or how much we may want to use it. In case we don't give it a trial, it is well to have the old apparatus or the old familiar plates ready for an emergency.

Next to the lack of familiar plates or films, comes the lack of the most suitable ones for the work in hand. Slow Iso plates are excellent for copying; but most of us prefer fast plates for photographing children, and for other work orthochromatic or panchromatic plates.

It seems ridiculous to think that any photographer would ever allow himself to run entirely out of plates; but we sometimes hear that excuse offered for not undertaking a piece of work. A lack of paper or chemicals we might excuse; the fault might be made up for later. But without plates, the negative is impossible, and we might as well be without a camera. Yet I once remarked, at the end of a perfect day, that I had just one plate left and it was getting so late that I might as well use it. I did. At the very next turn of the road was a picture that I tried for three years to get—a group of magnificent yuccas in full bloom towering above an imposing vista of mountain-peaks. In spite of long journeys and frequent reports from friends who went over that road, I never got that picture. One misfortune followed another—too strong a wind, light-struck plates, a plateholder shattered by sliding off the camera, the flowers withered over night by a hot wind, no flowers at all the following year, and the third year, the whole landscape was wiped out by a forest-fire. If I had only held back that last plate, for every condition was more favorable then than it ever was later. I always remember that catastrophe when I see an amateur using up the last exposures on a roll so that he can have it developed. With a film-camera, of course, it is a simple matter to have an extra roll in your pocket.

A picture may sometimes be missed even though the photographer has everything ready; he doesn't know how to make use of his re-



WISTFUL
ROGER PAUL JORDON

sources. A man bemoans the fact that he cannot photograph a room or a show-window at night, because he has no flashpowder; he does not know that he can photograph it with the aid of the ordinary electric lights by which it is illuminated. Or he is bothered because dozens of people are passing the lighted window, not knowing that with a five-minute or ten-minute exposure they would leave no trace in the picture. And even if he knows that he can copy a picture or photograph a bit of still-life by electric light, he has not made any trials to determine what exposure would be reasonable; so that in an emergency he is unprepared for prompt action.

One cure for ignorance of this kind is to read the photographic magazines and photographic books until you find yourself reading them just to see if there is a new idea tucked away in them somewhere; and keep on reading them, even then, because that new idea is always worth more than the price of the magazine. Even an old idea may be put in a way that you never thought of before, and it may set you in your turn to think up new ideas.

Lack of knowledge of new light-conditions is no excuse in the daytime, as an exposure-meter will give correct results in inexperienced hands under very unusual conditions. But there is a possibility of the opposite danger of relying so completely on a meter, that you are unable to make an exposure without it. If you have this trouble, notice that it is simpler to remember the time it takes the meter to color up to the tint, than it is to remember the exposure for the individual stop, plate and filter. Practice estimating in advance how long it will take the meter to color up. You will soon notice that one particular time occurs with great frequency, and that it is seldom twice that long, and still more rarely half as long. That is, if the meter generally colors in six seconds, it will rarely run as high as twelve seconds, whereas four seconds will be about as rapidly as it ever colors. With the same stop and shutter-speed, the latitude of the plate would generally take care of such variations; or, if you desire to make due allowance, the next larger or smaller stop would be the only change required. With a shutter-speed of 1/25 or 1/10 second U. S. 8 (F/11) might be the stop generally indicated. A change to U. S. 4 (F/8), when it is somewhat less bright, and to stop 16 when extremely bright, would be a simple way to remember it. Of course the subject-classification would have to be considered just as it is when relying entirely on the meter; for dark objects near the camera, the largest stop or a slower shutter-speed would rarely come amiss. Eventually, you might find yourself using the meter for convenience in calculating, even when you did not take the tint with the sensitive paper.

If you are so over-methodical that you never make a picture without setting up the tripod and focusing on the ground-glass; and if you always wait to use an exposure-meter, you will lose many a picture that you could just as well have if you cultivated a little more speed. Keep the shutter set for an average exposure; practice the use of the focusing-scale and keep a filled plateholder in the camera—you need not pull the slide unless you are certain that your camera is absolutely light-proof. That is the system of the novice who excels with his two-dollar film-box.

I know that they tell us terrible things will happen to our plates if we leave them in the holders too long; emanations from the wood of the plateholder or atmospheric conditions will cause deterioration and you are even afraid that they will be light-struck. Personally, I carried two exposed 5 x 7 plates in a plateholder through every climate in California for seven years, and developed them at the end of that time getting two negatives no worse than any others I exposed at that same general time. If there was deterioration, it was so well distributed over the surface of the plates that I couldn't see it. Plates kept in a box for even one year would have shown a decided fog around the edges. At any rate, plates will not spoil as readily as film; and if you are afraid of one spoiling, it will do no harm to snap a plate "quick," now and then, just to keep in practice and see how easy it is.

Possibly frequent trials have convinced you that you absolutely cannot focus by scale. If so, either your focusing-scale is incorrect or you should have a camera with a lens of shorter focus. The shorter the focus of a lens, the less trouble it will give you in securing correct focus, until the fixed-focus type is reached, requiring no attention whatever. Of course, with the shorter-focus lens we also get a smaller image: but at the same time we reduce the weight of the camera, so that the loss is not without its compensations.

As soon as I realized that my outfit was so bulky that it interfered with efficiency, I bought a folding film-camera and filled it and hung it up in the hall: and there it hangs, just as handy as the matches or the egg-beater. It has no double-swing back; no long-focus bellows with a reversible back and stereo front; no adjustable lens-front; it hasn't even a ground-glass nor an anastigmat lens. I don't even know whether it has a tripod-socket: I use the big camera for that serious and deliberate sort of



"A SHADOW CAME AND LINGERED
WHERE THE SUNLIGHT STOOD BEFORE"

FANNIE T. CASSIDY

work. But for convenience, the little camera is certainly a luxury; and I notice that most of the pictures I cherish for their human, personal note are made with it. It was a wise youth who offered to buy my old outfit on the very day my big camera appeared on the scene; and it was a foolish one who sold it to him.

Many an amateur is apt to think slightingly of his tiny camera in comparison with my imposingly professional-looking equipment; but many are the times that he need not if he only knew. For an athletic event, I once set my camera up on a tripod and focused on a given spot. I stood back some distance to avoid blurring with a slow shutter, and accordingly a small plate in a kit was all I needed. A friend was later bemoaning the fact that he "couldn't get pictures like that." In fact, he didn't even try—he knew it was useless because I had a "fast lens" with a wide angle to get the whole view on the plate at once, etc. I showed him that, with the size plate used, my angle was just about half the angle of his; my shutter-speed was no greater and the stops used probably about the same; but he actually had the advantage of me, because his film was twice as fast as the plate I had been compelled to use.

On another occasion, a man wouldn't snap a scene because he had no long-focus lens like my half lens; nor a ray-filter. Later, I was able to demonstrate to him that my long-focus lens had such a narrow angle that it would not have included the whole view on the plate, and a ray-filter was actually a disadvantage because it brought the blue sky and the orange clouds to exactly the same tone in the print. Without the filter, the clouds would have shown dark against a white sky.

A caution in regard to the use of many different brands of plates may not be amiss. Even if you do know how to use them all perfectly, they may get you into trouble in an unexpected way. I came very near losing entirely a view of the greatest eruption of Mt. Lassen ever known; and as it was, I got only an indifferent negative. The view required a ray-filter; but I didn't know which plates were in the various holders. The assortment included a Lumière Sigma (ultra rapid), a rapid Panchromatic, a rapid ordinary and a medium orthochromatic. If I put a filter on an ordinary plate, I would get no picture; the Panchromatic plate was twice as fast as the orthochromatic; and the filter was twice as fast on the Panchromatic as on the orthochromatic. To be absolutely safe, I left the filter off entirely and timed for a minimum exposure on the medium plate; there was no time for a second exposure, and I found that I had used the Sigma plate which in the circumstances was the least suitable of the lot.

As a remedy for this sort of confusion, the holders may all be numbered and an index kept to identify them. Or it may suffice simply to lay the holders on top of the box of plates from which they were filled. If they are apt to be disturbed, put the box of plates and the accompanying holders into a box or envelope until you are ready to use them. Some care is also required to prevent mixing exposed plates with unexposed ones, particularly if the slides stick so that they can be returned to the holders only with the "Unexposed" side out. Sandpapering them will sometimes permit reversing them properly after an exposure. It is not at all safe to store exposed plates in the same box with unexposed plates, unless they are unmistakably marked so that no confusion is possible. It is not enough simply to remember that they are in the bottom package or at the top of the box; sooner or later, you will forget and spoil two perfectly good exposures.

The user of Autochromes is often bothered by the necessity of stopping to reverse his ground-glass. Some day, perhaps, cameras will be made with a quick-acting snap for holding the ground-glass; meanwhile, it is convenient to put on a simple turn-button in place of the brass holders that have to be taken off entirely before they release the glass.

And after we do succeed in getting the negative with all possible despatch, the labor is sometimes wasted if we cannot show equal speed in the delivery of the print. In the darkroom, are the decks cleared for action? Is the place clean and free of dust, or is it a jumble of unlabeled solutions, doubtful developer and unspeakable hypo? When we pour a solution into a bottle, we generally know just what it is; but a few weeks later it would be convenient if there were a label on the bottle. A hydrometer will decide between single strength and double strength developer, but it can't perform a chemical analysis—in any event, time is wasted.

Are your solutions ready, or do you have to stop to weigh out chemicals and wait for them to dissolve? It is not necessary to mix up great quantities of solutions if you do only a little work at irregular intervals; but if you get things ready, at odd times, in advance, you will be astonished how easily you can develop a few negatives and turn off a batch of prints when a rush-call comes.

If you are not prepared to print from the wet negative in a daylight-enlarger or by contact, level the negative on a saucer and cover it fully with denatured alcohol; drain after a little while



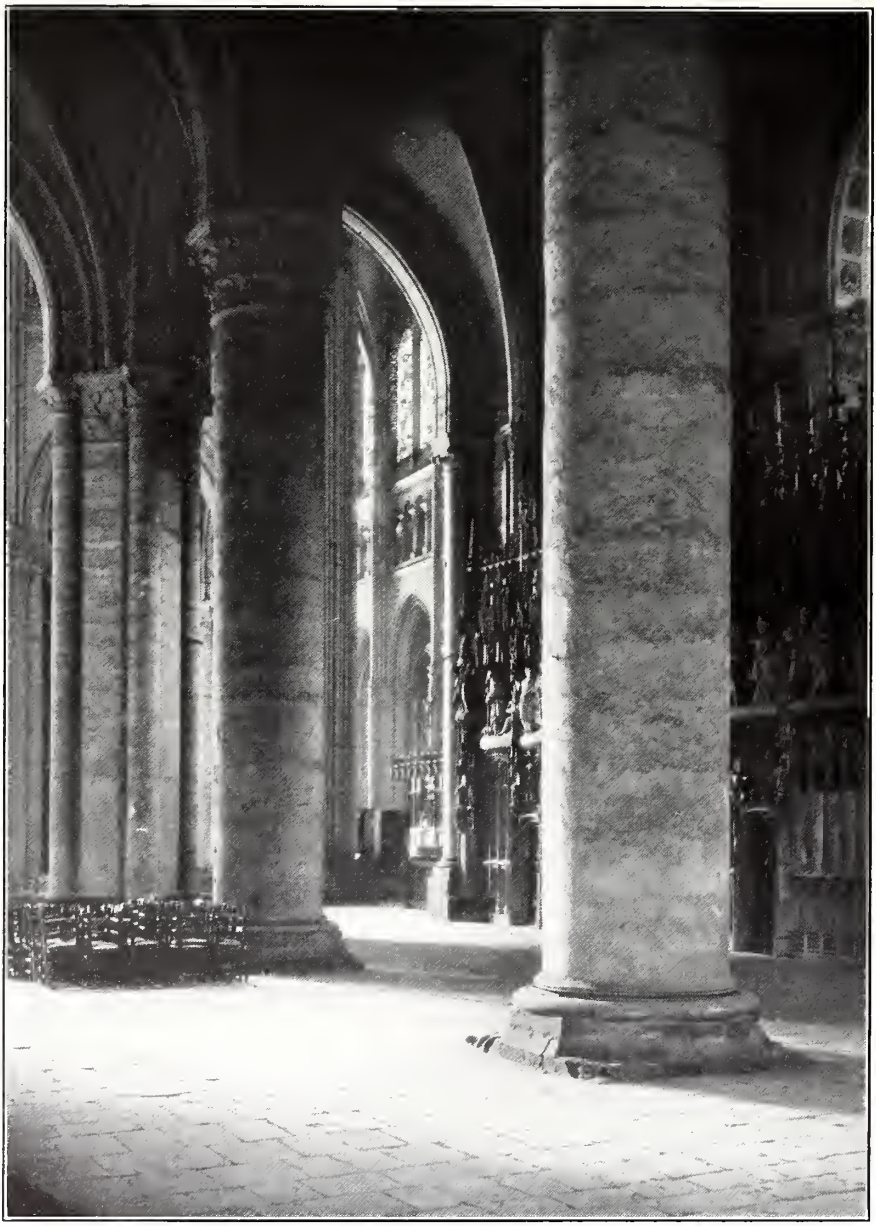
LUCY JARED GARDNER

and repeat the operation a couple of times. The negative may be held on the tips of the fingers, if care is taken not to touch the edge of the plate and cause the alcohol to run down the hand. If the negative is well saturated with alcohol, very little water will be left and it will dry almost instantly. If sufficient alcohol is not used, however, the negative may show streaks in drying.

For rush-work for newspapers, it is only necessary to rinse the prints in a change or two of water; blot off surplus water and pack them between blotters while still damp and they will dry during transmission.

In the last analysis, we come to the personal equation. Of course, it wouldn't be nice to suggest that you were lazy or sluggish, or any of those uncomplimentary things; we wouldn't even admit it ourselves. But, perhaps, you can remember one year when that first luxurious sunny day of spring made you think of pictures, and you got out your camera, cleaned up your outfit and got busy. And if that happens pretty regularly, every year, we stand convicted in spite of ourselves, don't we? Wouldn't it be glorious if we could cultivate that spring-feeling every day in the year?

When the call comes to go out after a picture, and you don't feel like it, admit to yourself that it is just pure indolence. Then when you have a good chance to say that the weather is too cold, or snowy, or blowy, or cloudy, or hazy, or the roads are too bad, you will know that it is just your chance to do "something different." And you will go out and do it.



Courtesy of Eastman Kodak Company

CHARTRES CATHEDRAL

EDITORIAL

The Amateur Photographers' Sacrifice

IN this land of plenty, of ours, a land literally flowing with milk and honey—to borrow a phrase from the Old Testament—the necessity to economize had not arisen until Hooverism had become a fact and not a theory. In England, they have begun to feel a shortage of nearly everything including photographic apparatus, largely because the importation of such goods has virtually ceased, and because the manufacturers of cameras and other photographic appliances are engaged on munition-work. An urgent plea on behalf of the Government and photographic specialists is made for apparatus which, instead of being in actual use, is hoarded. A similar condition prevails in this country. Is it too much to ask that owners of first-class equipments make a temporary sacrifice and offer them for the legitimate application in war-work?

For the pleasurable requirements of their hobby, these amateurs can utilize their former, discarded outfits which, with a little effort, can be made to do effective service. Readers of this magazine are familiar with the admirable results that have been produced with makeshifts, substitutes and skilfully improvised apparatus. As examples of such efforts, we need but point out the salon-pictures of W. H. Rabe and other artistic workers, who, for certain reasons, made their original exposures with inferior outfits, surmounting successfully more than ordinary obstacles. It is with a feeling of pride that the worker regards a successful achievement marked by the application of personal ingenuity or originality, such as a pictorial masterpiece produced by inadequate means.

The only commanding interpretations of oratorio music in this country are given in Boston by a chorus not one of whose members is a distinguished soloist; but drilled and led by a master-musician—Emil Mollenhauer. Was not the Madonna della Sedia painted on the end of a barrel instead of an aristocratic canvas? Many a gem has been done on an ordinary wooden panel or rough piece of cardboard when the artist could not afford a more desirable base. Who does not remember the blind street-musician who fiddled industriously, with nary a coin coming his way, when suddenly a stranger (the great Wieniawski) emerged from the crowd of onlookers, snatched the instrument from its owner's hands and drew from its humble depths such glorious music that, the moment he had finished, silver fairly rained into the box of the bewildered mendicant. Wieniawski departed as quickly as he had come. It is, then, not so much the superiority of the medium employed, as it is the ability and resourcefulness of the artist. So let the amateur photographer, who is a true American and whose heart is in this war, give substantial proof of his patriotic sentiments by supporting the Government in every possible way. The highest test is personal sacrifice of life or worldly goods.

The Soaring Price of Hypo

WHO would have thought, several years ago, that hypo—cheap, unpretentious hypo—would ever rise to the dignity of a high-priced chemical? Known as a by-product, and sold at retail at a few cents a pound and, in wholesale quantities, even at a lower price, hypo has yielded but little profit to the manufacturer. The salt is now produced in the usual way so rarely in England that, in order to meet the demand, it is being made by a special and expensive process. Naturally, the price overseas has risen so that it now retails at about thirty cents a pound, with the prospect of the price being advanced. Suggestions that tend toward economy in the use of photographic chemicals, also apply to sodium hyposulphite. In exercising thrift, however, the consumer must bear in mind that the hypo fixing-bath is easily contaminated by the developer and, in such a state, retards the process of fixing. Or, when charged with Amidol or some other developing-agent—due to insufficient rinsing after development—it acts in the manner of a reducer. Professional workers who are accustomed to make up their solutions at random, *i.e.*, estimating roughly, without measuring, the required quantity of each ingredient, prepare the fixing-bath in the same careless way. When it begins to act sluggishly, they merely throw in a handful of hypo and do not stop to examine its actual physical condition. As a consequence they, too, get unsatisfactory negatives—a result that can be obviated by replacing the exhausted fixing-bath by a fresh one. It is wise, therefore, to discriminate between true and false economy, even when it concerns so costly a chemical as sodium hyposulphite.

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367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value $10.00.
Second Prize: Value $5.00.
Third Prize: Value $2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. As many prints as desired, may be entered, ***but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print exactly for what competition it is intended.***

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board, not the flexible kind—or with thin wood-veneer.* Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—"Outdoor-Genres" Competition Closed September 30, 1918

First Prize: Paul Wierum.
Second Prize: Harry G. Phister.
Third Prize: Leopold Zwarg.

Honorable Mention: Nathaniel E. Brooks, Louis F. Bucher, L. C. Buck, J. T. Dimbleby, Ethel Dismukes, Louis A. Dyar, Geo. W. French, S. H. Gottscho, W. S. Hamaker, F. C. Jenison, Dr. Maclay Lyon, G. H. McKelway, Stephen Marsh, F. W. G. Moebus, Louis R. Murray, Maude D. K. Paget, Dr. J. B. Pardoe, Geo. P. Russell, G. H. Seelig, G. R. Smith, Kenneth D. Smith.

Subjects for Competition — 1918

"Architectural Subjects." Closes October 31.
"Domestic Pets." Closes November 30.
"Indoor-Genres." Closes December 31.

1919

"The Spirit of Christmas." Closes January 31.
"Still-Life." Closes February 28.
"The Spirit of Winter." Closes March 31.
"Rainy-Day Pictures." Closes April 30.
"Miscellaneous." Closes May 31.
"The Spirit of Spring." Closes June 30.
"Landscapes with Figures." Closes July 31.
"Shore-Scenes." Closes August 31.
"Outdoor-Genres." Closes September 30.

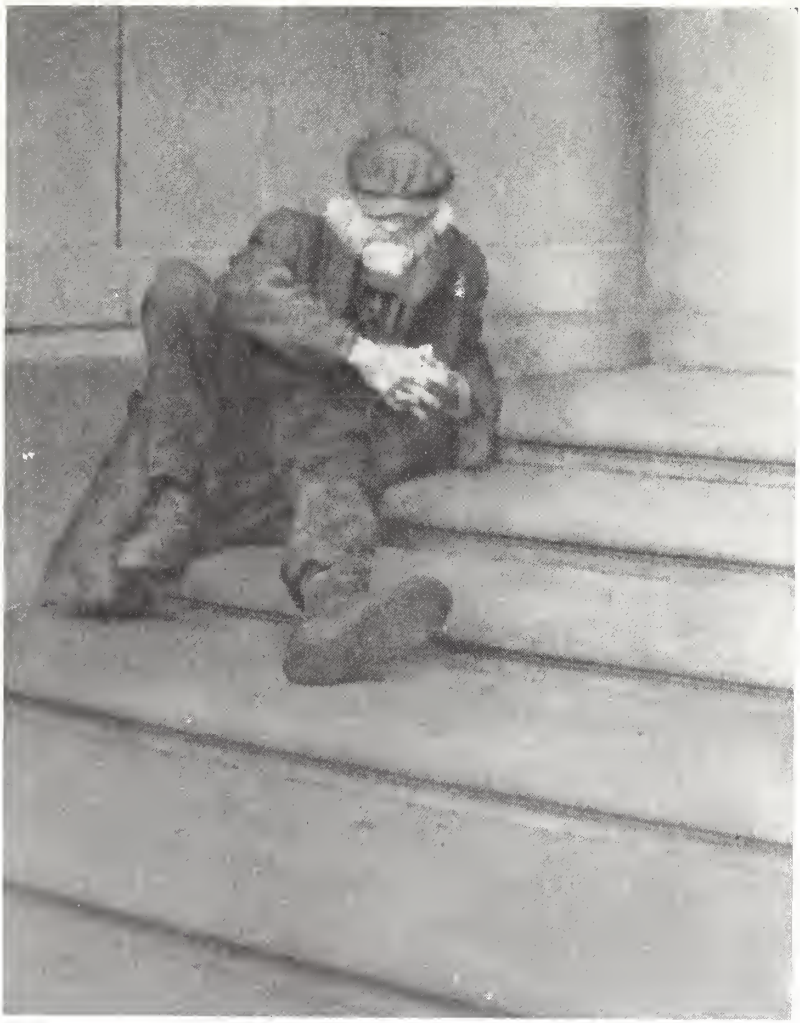


Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize ($10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

To Readers of Photo-Era

DESPITE the unprecedented conditions brought on by the war, PHOTO-ERA has maintained its supremacy in the field of photographic journalism. The next issue will be the first in 1919 and we advise subscribers to see to it that their subscriptions do not lapse. PHOTO-ERA will try not to disappoint you in 1919.



FIRST PRIZE—OUTDOOR-GENRES

NEAR THE END OF THE ROAD
PAUL WIERUM

Advanced Competition — Spirit of Christmas Closes January 31, 1919

Never, in the history of this generation, has there been such a Christmas as the present one. In the short space of a year, another world has been in the making and the United States has taken an active part in this evolution. A spirit of unity undreamed of a generation ago now characterizes the military, political and social relations of the Allies. If ever the spirit of Christmas and the "brotherhood of man" needed pictorial expression, it does now. Although the Christmas of home and family holds first place, there is this year the Christmas of an entire world to portray.

Obviously, participants in this competition cannot travel to Europe to picture this international Christmas; but there are many opportunities here at home. Virtually, every one of our allies has military or civilian representatives in the United States. Many of these will be invited into our homes for Christmas and for the cheer that only those in a foreign land know how to appreciate. In turn, our boys in France, England and Italy will receive invitations to share the Christmas-spirit. What an historical and pictorial opportunity for the camerists! A well-composed group around an American Christmas-tree which includes French, English, Italian or other Allied friends and visitors, would constitute a picture of inestimable value. It would typify the great international Christmas of 1918.

A year ago, although many of our boys were in the service or had gone to France, we still knew that most of them were unharmed. This Christmas finds us welcoming home scores of wounded and permanently disabled heroes. These boys need an expression of the true Christmas-spirit as never before. In homes, hospitals and convalescent-centers, everything that a grateful nation can do will be done to make our boys feel that, despite the loss of sight, an arm or a leg, they have made our Christmas possible. If they had not done their utmost patriotic duty, we, too, might have known the whirring-sound of a bombing-plane and the destruction of our homes. Camerists could have no better subject than to visualize for us all the 1918 spirit of Christmas as it fills and cheers our boys.

We must not forget the thousands of men and women in shipyards, munition-plants, mills and business who have done "their bit," as well as the soldiers and sailors. To them, the spirit of Christmas means as much, and the camerist should aim to portray these faithful workers in their Christmas celebration. True enough, there is nothing spectacular about the munition-worker or the machinist; but where would our boys overseas be without this force of men "over here"? Here, again, is emphasized the international and inter-sectional spirit of the Christmas of 1918. Those camerists, who live near the shipyards and munition-plants, must know some of the workers and, if so, I am sure arrangements could be made to enable the camerist to obtain a picture that would not conflict with governmental regulations. Perhaps, never again—and I hope so—will the camerist find the subjects that now abound which depict men and women working feverishly to make death-dealing devices of every description. Although it is all for the noblest cause for which any nation ever went to war, let us hope that camerists will seek in vain for the munition-worker as a subject at Christmas-time next year. Hence, let contestants make the most of present exceptional opportunities.

In the homes that have escaped the sting of war, the Christmas-spirit will focus upon the children. Whatever their elders may have suffered, the children should have their Christmas-tree as of old. No picture—if properly composed and exposed—has greater appeal than one that portrays the children and their Christmas-tree, or any one of the many events of Christmas-day. I do not remember ever to have seen a picture that portrayed that moment of moments when the Christmas-presents are about to be opened and the children are beside themselves with curiosity and excitement. What a picture it would make! Another subject that appeals is one which pictures the tired child asleep with its favorite present clasped tightly in its arms and the mother leaning over the child in tender solicitude. Those camerists who are blessed with children should find no difficulty to get the youngsters to co-operate with them in the production of a picture that will breathe the very spirit of Christmas. Directly or indirectly, the children are responsible for the beauty, love, kindness and good cheer that radiate on Christmas-day; hence, pictures of the children are the most highly prized of all.

Groups around the Christmas-tree present a difficult problem to the camerist at the present time. Virtually the only solution of the exposure-question is in the use of a flashlight, aided by such electric, gas or daylight as may be available and convenient to employ. Unfortunately, the use of flash-powder is now regulated by the government and, when obtainable, is expensive. Unless the photographer is "stocked up" with flashlight-powder and the necessary apparatus, his only recourse is a time-exposure of some seconds' duration. There are nitrogen-filled electric-lamps that yield an extremely brilliant actinic light. If house-wiring will permit, these may be used. Likewise, those camerists who are fortunate enough to own home-portrait outfits equipped with electric arc-lamp may obtain results. The use of gas is virtually out of the question, even when the powerful Welsbach mantles are used. Delightful indoor-genres may be made by daylight, gas and electric light; but an exposure of a fraction of a second is out of the question and that is exactly what is needed to photograph a group including children around a Christmas-tree. The use of flash-powder will be sorely missed in this respect, for with it virtually an instantaneous exposure may be made. The resourcefulness and originality of the camerist will be put to the test; and, after all, that is what makes these competitions eminently worthwhile.

Camerists who decide to seek the spirit of Christmas out-of-doors, will do well to bear in mind that this Christmas is not, and never will be, like any other. For this very reason, every effort should be made to portray that which typifies the present. In due course of time, we shall return to the conventional Christmas-days that we have known from childhood and for that very reason the camerist should concentrate his attention on those subjects that are here to-day, and gone to-morrow—forever. This year, the streets in city and country will be filled with soldiers and sailors who have come home for Christmas. Among them will be those who are wounded and those who have given an arm or a leg to help make the world safe for democracy. There will be innumerable opportunities to portray what Christmas means to these boys. Some will show by their faces that Christmas, this year, has a deeper significance than ever before; others will appear care-free and filled with boyish enthusiasm. Then, again, there are the Red Cross nurses, naval yeowomen and hundreds of women's organizations—some in uniform and others in civilian clothes—who are among us this Christmas and who may be a thing of the past in another year. The noblest women among them all are those who wear the gold star and who,



CAUGHT IN THE ACT — HARRY G. PHISTER

SECOND PRIZE — OUTDOOR-GENRES

despite their loss, go about this Christmas on errands of mercy and good cheer. I cannot tell contestants how to get such pictures, because they were never obtainable before. Most of us belong to some military or civilian organization devoted to the winning of the war and we know that opportunities exist to obtain the sort of pictures to merit the favorable attention of the competition-judges; but how to make them—that is up to the camerist.

One year ago, I wrote the following sentences in this department and I cannot improve upon them: "To express, pictorially, that which lies too deep for words is an undertaking worthy the best mental and physical effort. Above all, make each picture speak the truth. Let absolute sincerity govern every step, so that the beholder feels and appreciates what the Christmas of 1917 (now 1918) means throughout the world. Prize-winners in this momentous competition will have reason, in the years to come, to rejoice that they were enabled to portray, in a picture, thoughts which thousands carried in their hearts, but were unable to express."

A. H. B.

Patriotic Pictorial Competition

The pictorial competition announced in the advertising-section of this issue, should stimulate every camerist in this country to produce a striking record of any one of the many scenes suggested in the announcement. Tell every camerist you know, of this unusual competition, which is open, without restrictions, to all —amateurs and professionals alike.

The cash prize of $15.00 for the best picture, and $10.00 for the second best, together with the honor and satisfaction to help Uncle Sam assemble first-class permanent records of this great war, should stimulate every camera-user to get busy. Remember that the closing-date is December 15, 1918.



WATER BATH CHARMS — LEOPOLD ZWARG

THIRD PRIZE—OUTDOOR-GENRES

The Missing Lens-Hood

The old-style portrait-lenses were provided with a front-hood, the length or depth of which depended upon the size of the objective or lens. Lenses used in field-work also used to have this feature, whose object was to prevent extreme marginal rays from reaching and passing through the lens and, in this way, increasing the brilliancy of the resulting negative and print. The modern lens, being constructed with a view to compactness and convenience, is not provided with a hood. This omission, however, does not matter when a lens is fitted to a camera of the box-form, because the front of the camera is so deep as to act as a hood and thus prevents the entrance of the undesirable light-rays. Many of the modern types of portraiture-lenses are made without any hood, and in that case the careful photographer provides one which he improvises from a piece of stiff paper and blackened on the inside. If such an improvised hood is more than a few inches in length, it is well to have its divergent shape made so as not to come within the angle or view of the lens, otherwise, it will obstruct the image and the corners, if not also the edges, of the plate. For work out-of-doors, the lens that is attached to a view-camera can be temporarily provided with an improvised hood and removed when the camerist is through; but in such cases, care should be taken that the angle of view of the lens is not interfered with. It is also necessary that such a hood, regardless of the outside color, be black on the inside. W. A. F.

A Candid Opinion

Fuzzygrapher—"Now, I want you to give me your candid opinion of my latest picture, old chap."

Friend—"My dear boy, it's quite worthless!"

Fuzzygrapher—"Yes, I know that; but I'm dying to hear it, all the same!"

THE CRUCIBLE

A MONTHLY DIGEST OF PHOTOGRAPHIC FACTS

With Reviews of Foreign Magazines, Progress and Investigation

Edited by A. H. BEARDSLEY

The Carbon-Process

It seems a pity that at a time like the present, when circumstances are so much against the more ordinary photographic processes, so little is heard of carbon. In it, we not only have a method which has an infinite range of colors and surfaces, as well as a high reputation for permanence, but one the materials for which are less affected by war-conditions than those for any other. The extreme purity so necessary in paper for silver printing is not required in the carbon process: while gelatine of suitable character, and a long list of pigments, are still obtainable quite easily. Even if the shortage of potassium compounds makes the price of potassium bichromate a high one, comparatively little of it is required; and that little can be replaced by ammonium or sodium bichromate without any ill result. Indeed, some workers have always used ammonium bichromate as the sensitizer. Carbon-printing really ought to respond to a little judicious pushing at the present moment.—*A. P. and P.*

The Purity of Mounts

Mounting boards or papers bought from a reliable firm may be assumed to be free of any deleterious substances; but when materials that have not been made or selected for photography are in use as mounts for any form of silver print, some kind of test should be made of them. One is to mount a print on the paper in question, cover half of it with moist blotting-paper —which itself must be of the kind made for photography, as if it is impure the mount might be condemned for a fault not its own—and then, putting it in a printing-frame under glass, to expose it for a day or two. Any difference between the covered and uncovered half would indicate that the mount was defective. Another plan is to cut up some of the mount into small pieces, to soak these in distilled water for an hour or two, and then to test the water. The permanganate test is a good one for the purpose. A solution of potassium permanganate of a faintly pink color should not have its color discharged by the addition of some of the water in which the mount has been soaking. Such a test does not indicate definitely that the paper is suitable for the purpose—no single test could do so —but it shows that the most likely ingredient of a harmful character, hypo to wit, is not present. It may be noted that in the case of platinum prints there is no need of such a test, as the platinum image is quite unaffected by any trace of hypo or other soluble substance likely to be derived from the mount.

Photography.

Rectilinear vs. Anastigmat

Of what advantage is an anastigmat working at F/8 over a rapid rectilinear working at the same aperture? asks a writer in *Photography*. He answers his own question by stating that this or some similar question arises often in the mind of the amateur, who may or may not know the reply. There is a marked advantage, as a comparison shows at once, because, although the rectilinear works at F/8, it will not cover a plate properly right up to the corners at this aperture unless the lens is one of long focus compared with the size of the picture. As we go further and further from the center in our examination of the image given by the R.R., the character of the definition appears worse and worse, and this can be remedied only by stopping down. This is not a fault of the maker, but it is inherent in the type: although some R.R. lenses in this respect are better than others. Old ones by the leading makers are almost always better than modern ones. An anastigmat of any quality at all should give perfect definition at full aperture over the whole of the plate which it is intended to cover, the only necessity to stop down arising when it is desired to get near and distant objects sharp at the same time. In this last respect, the best anastigmat is not superior to any other lens.

Old Gaslight-Paper

In advising a correspondent how to obtain good whites in stale gaslight-paper, the *Amateur Photographer* gave the following directions: "You do not say whether the whites of your prints are stained or fogged. If stained, the cause may be stale or contaminated developer. If fogged, it may be due to faulty treatment at time of exposure—*i.e.*, allowing too much light to reach the unshielded paper. The remedy is obvious in both cases. Two years is not an unduly long period to keep gaslight-paper in good condition, provided it has been kept from damp; and we suggest a further trial with special care in handling and exposure, using a fresh strong developer with a full quantity of bromide. If the veiling of the whites continues, in spite of these precautions, you might try soaking a sheet (in the dark) for three or four minutes in a solution of one grain of potassium bichromate to the ounce of water, washing it in several changes of water, and then allowing it to dry in the dark before use. Stale paper can frequently be saved by this treatment."

Softening Hard Contrasts with a Daylight Enlarger

Users of the cheaper fixed focus enlargers sometimes find that their negatives are somewhat too harsh in contrast, or, in other words, over-dense for enlarging purposes. One of the simplest ways to avoid "chalky" highlights is to fog the bromide paper slightly by striking an ordinary match in the darkroom. As only slight fogging is required, a better plan, in the experience of the present writer, is as follows: The bromide paper is exposed in the enlarger in the usual way. The negative is then removed from the carrier, and a further very short exposure is given to the paper. This will be found to reduce the contrasts considerably. It must be noted, however, that the light that is allowed to fall upon the paper without the negative will be much more powerful, so that only a very brief exposure must be given. The bromide paper must then be developed in the usual way. Now that the small camera and automatic enlarger are so popular, many workers will no doubt be glad to know of the above simple method to deal with over-dense negatives for enlarging, which, however, are just right for printing-out paper or self-toning paper.—*Romsey.*

BEGINNERS' COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Round Robin Guild Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value, $2.50.
Second Prize: Value, $1.50.
Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Certificates of award, printed on parchment-paper, signed by the Publisher, and suitable for framing, will be sent on request, and free of charge, to winners of prizes or Honorable Mention.

Subject for each contest is ***"Miscellaneous";*** but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than one year's practical camera-activity, and without any practical help from friend or professional expert. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4}$ x $3\frac{3}{4}$ to and including $3\frac{1}{4}$ x $5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. As many prints as desired, in any medium except blue-print, may be entered, but they must represent the unaided work of the competitor from start to finish, and must be tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* ***Criticism on request.***

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter,* SENT SEPARATELY, *giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request.* ***Be sure to state on the back of every print for what contest it is intended.***

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of* ***stiff*** *corrugated board—not the flexible kind, or with thin wood-veneer.* Large packages may be sent by express.

Awards—Beginners' Competition
Closed September 30, 1918

First Prize: Carl G. Brown.
Second Prize: R. L. Cline.
Honorable Mention: Frank P. Adams, Matti Antila, Al. Ray, E. H. Smith.

Change in the Beginners' Competition

THE Publisher is fully aware that the character of this competition calls for a change. By having permitted workers to enter prints here that have never been in a competition elsewhere, he has given a generous scope and wide interest to this competition, which appears to have won general approval, judging by the number of participants. Of late, however, the pictorial standard of contributions to this competition has been of a very high order—so much so, indeed, that real beginners have been crowded out.

In future, this competition will be limited to actual beginners, but not to those who have been using their cameras only a few weeks. Competitors must have had some really practical experience in pictorial selection, developing and printing. Those who make only the exposures, entrusting the photo-finishing to others—friends or professional experts—are not eligible; neither are workers of over one year's camera-activity. Past and future participants who have won a first prize in the Beginners' Competition automatically drop out, but may enter the Competition for Advanced Workers. The three prizes, offered in the Beginners' Competition, will be continued as heretofore.

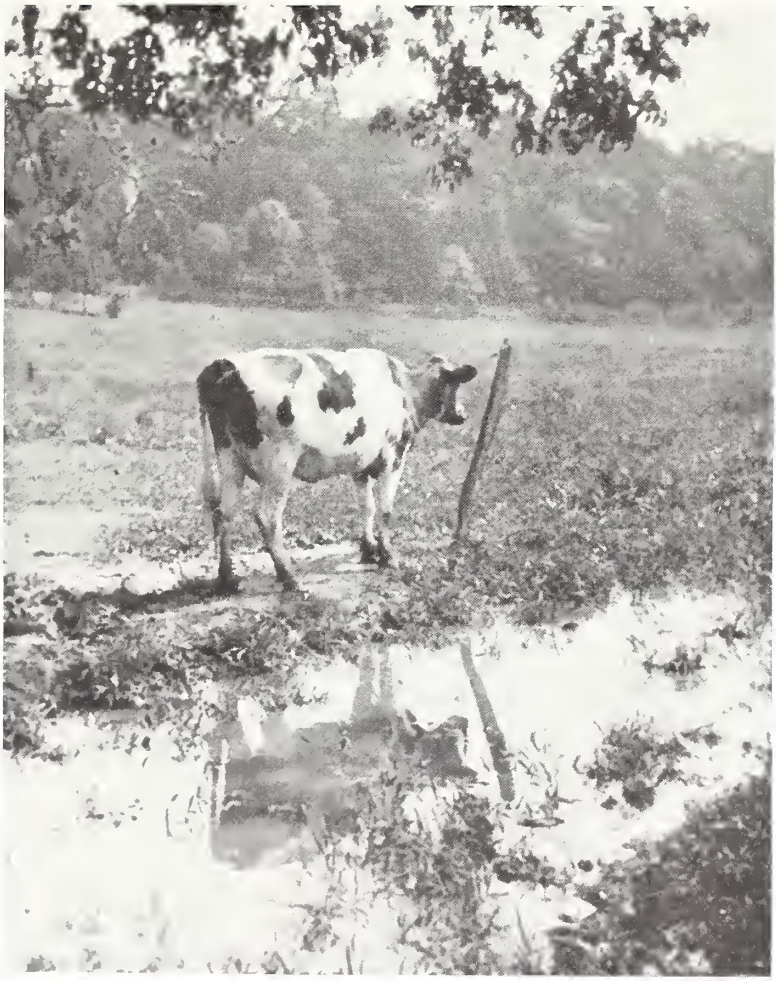
Stained Gaslight-Prints

ONE of the greatest objections to the gaslight process, to my mind, is the tendency to stain. Even a slight underexposure will bring this about. Any means to remove the stain, and so save the print, should be of interest, and with this idea I venture to describe my own method. The print which is stained is first bleached in the ordinary bath for sepia-toning, then rinsed in water, and finally is redeveloped in any developer which is suitable for gaslight paper. The bleaching should be enough to remove the stain, but no more, and to avoid change of color. No further fixing is required, but the washing should be carried out.

F. N. W. B., *in A. P. and P.*

Removing Hypo from Negatives

SOME workers waste a lot of gray matter over washing negatives to remove the hypo, when the thing is simplicity itself. Use plenty of fresh water—that is all. Less hypo in the film is eliminated when the negatives remain stationary than when they are in motion. When the plates are soaked in frequent changes of fresh water, virtually all the hypo in the film is removed in twenty minutes; if the plates and water are kept in motion, ten minutes will suffice. Hence, it is useless to rinse the negatives more than twenty minutes, particularly in warm weather, when prolonged washing has a tendency to soften the film.



FIRST PRIZE—BEGINNERS' COMPETITION

IN A QUIET PASTURE
CARL G. BROWN

Christmas, 1918, and the Beginner

At the outset, let the beginner realize that this Christmas is different from the one a year ago. Not in its spirit, but in its practical relation to our lives. Certain commodities that we may wish to give to our friends are "off the market"; others are worth a king's ransom and still others are so inferior—due to attempted substitution—that we would not give them to any one. Fortunately, there still remain many photographic accessories, dear to the heart of the tyro, that we may give; but in so doing we must use good judgment and practice the strictest economy.

One of the remarkable and likewise admirable phases of the war, with regard to the photographic industry in the United States, is the outstanding fact that the industry as a whole *did not* and *does not* raise retail prices except as justified by sound business-principles, to which no one could take exception. In no case has Photo-Era found an unwarranted advance in retail-prices. Thanks to this excellent situation, we may still purchase a camera at a reasonable price and most accessories to go with it. However, let us bear in mind that this Christmas is not like others that we have known. In no circumstances should a beginner who owns a serviceable camera be given another one. Not that we begrudge the manufacturer every possible profit, but rather that we remember governmental requests to conserve the materials that go to make a good camera. If we give a new camera to a person who already has one or more, we are depriving some one—for the supply is limited—of that which he should have. Moreover, we are using up valuable material to no advantage for it is human nature to use the new and cast off the old, even if the old is serviceable. Hence, let us do our camera-buying very carefully this Christmas in order that we may give to him who should have the gift and, at the same time, uphold our administration in its efforts to win the war.

There are many accessories that are still on the market at a reasonable price. No amateur photographer has all of these, and a little quiet investigation will disclose some item that he lacks. Perhaps, one plateholder, a pair of film-clips, a film-pack adapter, developing-tank, changing-bag, darkroom-lamp, photo-album, jar of paste, white marking-ink, carrying-case, exposure-meter, portrait-attachment, box of dry-plates, a dozen roll-films or film-packs, ray-filter, printing-frame, gross of printing-paper, developing- and washing-trays or any one of many other accessories will make the difference between a "merry" Christmas and a disappointed one. Every amateur photographer should realize that he must not expect an outpouring of photographic equipment from his friends this Christmas. Instead, he should welcome the gifts, such as they are, with heartiness for, in a measure, his deprivation is a step toward the permanent destruction of the cause of his and many other unpleasant experiences.

This Christmas, the beginner should be abroad early and late to photograph persons, scenes and events that will never occur again. The fact that he is a beginner makes no difference whatever—the results are what count. Even if he has not the slightest idea how he obtained this or that picture, his humble effort may amount to a masterpiece. In the department for advanced workers and in this department, I am making the strongest possible appeal for amateurs and professionals to use their cameras this Christmas, as never before. All over the United States and Canada there are and will be subjects of historical and pictorial value that can never be duplicated. News-photographers and motion-picture camera-men cannot be everywhere, and it therefore devolves upon the thousands of amateur and professional photographers to perpetuate pictorially for all time the stirring events of the Christmas of 1918.

Those beginners who have been fortunate to obtain considerable photographic equipment will do well to make an inventory and, if possible, dispose of part of their "stock" to those who lack the necessary items or to a photo-dealer. There is a big demand for used automobiles, owing to the partial discontinuance of their manufacture. Although conditions are not so drastic in the photographic industry; nevertheless, there is a pronounced demand for good used photo-equipment, including standard cameras and lenses. A beginner who owns more photo-apparatus than he can use to advantage, should note the signs of the times and discard all that is not in actual use. In so doing, he will not only render a distinct service but he will clear his own "stock" to receive newer and fresher goods when conditions again become normal.

Above all, stop photographic puttering. By that I mean, eliminate all desire to dabble with various developers, solutions and methods. Chemicals are too rare and costly, these days, to be wasted even in serious experimental work. Confine all work to the practical production of really worthwhile pictures. There will be time and opportunity enough, at a later date, to resume efforts to discover "something different."

Beginners are urged to enter the Patriotic Pictorial Competition announced in the advertising-pages. This competition should stimulate every camerist in this country to produce a striking record of any one of the many scenes suggested in the announcement. The cash-prizes to be awarded offer a real inducement to beginners and advanced workers. This is directly in line with my appeal to have camerists make the most of present opportunities.

It will be seen that the Christmas of 1918 has a very unusual relation to the beginner. It should be clear also that the beginner is acknowledged to be an important factor in the success of the plan to obtain a comprehensive pictorial record of epoch-making events. Although we ask him to discourage thoughtless gift-giving and to practice the strictest possible economy, we know that we can depend upon his hearty patriotic co-operation. In the years to come, there will be untold satisfaction in the thought that at the word of their government the amateur and professional photographers of the United States turned to with a will to make the pictorial history of the war a pronounced success.

Perhaps, no one thing could bring home to the beginner a keener realization of the tremendous importance of photography than this great war-record in the making. Think of what such a record of the Civil War or of the Spanish-American War would mean to us to-day. Photography never was simpler than it is to-day, and by its very simplicity and efficiency it has won its present commanding position.

A. H. B.

Change in Our December Competition

Owing to the increasing interest in genre-photography, we have decided to change the Flashlight Competition to Indoor-Genres, the closing-date to remain December 31. Our competition, Outdoor-Genres, appears to have aroused widespread enthusiasm, and we believe that a competition devoted to Indoor-Genres will be heartily welcomed by amateur and professional photographers.

Cutting Dryplates

For some time to come the present high price of glass-plates is likely to continue. The supply is also conditional, and these conditions may become even more onerous. It is possible that the supply in the near future may not equal the demand.

The professional himself can help in several ways. One way is to use smaller plates, and enlarge. Another is to use up the stocks of old plates. In both cases, it is often necessary to cut each plate into two, or more, smaller ones; or to cut off the edges of stale plates, and reduce them to a standard size for use.

When cutting plates in the darkroom, several difficulties are encountered. The cut plates must be accurate sizes. The emulsion itself must not be touched, or finger-marks will inevitably show in the final result.

Grit and dust—mostly in the shape of fine particles of glass—must not be allowed to get between the emulsion and the cutting-board. The tools used must be efficient, simple and strong, as the plates must be exposed as little as possible to the darkroom-light. And, lastly, the plates must be repacked so that the powdered glass from the new cut does not get between the plates. Tiny fragments adhere to the broken edges of the emulsion unless the cut is a very clean one.

The writer has cut up a large number of plates, and the following description of the method evolved, after numerous failures, will be helpful, at all events to the novice. A good diamond is necessary. It does not pay to use the wheel substitutes. A flat cutting-board should be procured. A small drawing-board, or even a domestic pastry-board, is very suitable. A strip of any simple moulding, with a perfectly straight edge, should be nailed or screwed near to, and the full length of, one of the edges of the board. The size does not greatly matter, so long as it is big enough for the largest plates likely to require cutting.

A cutting-shape should be made for each size of plate required. A piece of three-ply wood answers admirably. One edge should be perfectly straight, and the other should have a small screw inserted edgewise near each end. If the piece of wood is cut $\frac{1}{4}$ inch less than the size required, and the screws project say a little over $\frac{1}{8}$ inch, the cut of the diamond will be about the right place, but exact adjustment may be obtained by means of the screws after a few trials on a piece of old glass. By having a piece of wood for each dimension, accuracy is ensured. Of course, there are ingenious contrivances for adjustable shapes; but nothing so easily made, and accurate and reliable, has been seen by the writer. Bore a small hole in each cutting-plate, and keep them hung up. Nothing more is needed in the way of apparatus.

When cutting the plates keep away from the safelight. As each plate is dealt with put it in the shade or, better, in a drawer under the cutting-table. Take two plates and see that they are film to film as originally packed, but with no separator between. This enables them to be freely handled. Lay both the plates on the cutting-board, put the shape on top of the plates, with the two screws butting against the straight edge, as, of course, also are the plates. Now, make the cut. A little practice on old negatives will soon show the best angle at which your diamond cuts. Turn the plates over, still film to film, and cut the other.

Now separate the two plates, and break them along the cut, without breaking the film. Fold up each plate in halves, film to film again, and leave them so, *and unbroken*, until ready to load them into plateholders, or until they are cut, if required, to a still smaller size. This allows free handling after cutting, prevents the films from rubbing against each other, and keeps the newly cut edge, with its danger of powdered glass, sealed off from getting between the two plates.

Some of our plate-makers now pack their plates in this way and the rest ought to do so. The separating strips of paper used by most of them usually affect the emulsion within six months or so; and, the plates not touching, the edges soon go all round. The writer's experience is that this method is about the worst possible way to pack plates, with a view to their reaching a healthy old age. Face to face, in actual contact, with film unbroken to prevent rubbing, is the best. If our plate-makers would occasionally buy and use a box of their few years' old brand from the village-store they would learn something.

The writer regrets to record that his experience is that foreign plates are as a rule better packed than English plates—hard, impermeable black paper, and double outer-waxed paper for each four plates, in the one case; small pieces of common, thin, brown paper—three bits in a box of twelve plates—barely big enough to cover the four plates, in the other case. There are rare exceptions; some of our makers *do* pack their plates conscientiously.—J. C., *British Journal*.



COUNTRY-ROAD R. L. CLINE

SECOND PRIZE—BEGINNERS' COMPETITION

A Canadian newspaper published not long ago the following item: Lost—camera taken from seat in Colonial Chocolate Shop. Present possessor will please return and avoid exposure.

ANSWERS TO QUERIES

Subscribers and regular readers wishing information upon any point in connection with their photographic work are invited to make use of this department. Address all inquiries to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. If a personal reply is desired, enclose a self-addressed, stamped envelope.*

P. W. D.—**Transferring photographs to watch-dials** can be done by the collodion emulsion or the carbon process. But as this requires considerable technical skill, we recommend that you entrust the work to a reliable expert, such as The O'Hara Waltham Dial Co., Waltham, Mass., who would put the photograph on and make it permanent by baking it. The Carman Art-Company, 79 Dearborn Street, Chicago, do fine work by the carbon transfer process. The cost would be $3.00; the Waltham firm's charge about $9.00.

R. U. A.—**To ensure good cloud-effects in general landscape-work,** you need both an orthochromatic plate and a color-screen; one alone is not sufficient. Since you appear to prefer Seed plates, use Seed Orthochromatic, which are the same speed as the Seed 26x you now employ. Ordinary landscape-work does not require a screen so deep as your 10-time screen. A three- or four-time screen would be ample unless absolute color-rendering is a consideration, as in the photographing of furniture, paintings and similar commercial work. Try a Burke & James 3-time screen.

H. W. S.—**Taking pictures from an airplane** requires both nerve and unusual technical ability. The exposures must be very short because of the great speed at which the airplane travels and the veritable flood of light radiating in all directions. At a greater height than about four thousand feet, satisfactory pictures are almost unobtainable, as the particles of water and dust suspended in the atmosphere affect the definition of the picture. A two- or three-time screen is of great importance; and at great altitudes, where the blue of the sky is intense, a six-time screen will produce the best negative.

T. H. S.—**An aplanat lens** is one which is capable of good definition at a large aperture, because chromatic and spherical aberrations have been sufficiently corrected. The name is generally applied to lenses of the rapid rectilinear type. The aplanat is not an anastigmat.

B. C. D.—**An unsymmetrical anastigmat may be used for enlarging-purposes,** but it must be reversed so that the front lens, which, when used on an ordinary camera is towards the distant object, will be towards the bromide paper, whereas the back lens will be towards the negative. On this basis the lens will be employed under conditions similar to normal use in a camera, *i.e.*, object *farthest* from the front lens and plate *nearest* the back lens. If an unsymmetrical lens is used for enlarging-purposes, with the front lens towards the negative in the usual manner, the fine spherical correction will be lost, and even a fair result can be obtained only by the aid of a small stop. The more rapid, the greater will be the defect.

J. M. B.—**A rapid symmetrical lens is a rapid rectilinear** with the front and back combinations of similar construction and of equal focal length.

C. F. H.—**Photography in a warm climate** such as yours is invariably fraught with difficulties, even under the best of conditions, and it is not easy to determine the cause. Are you certain that your plates are fresh and that they have been properly stored on edge, in a dry place, to avoid the effects of humidity? If you are certain of this, the trouble must be in developing them. It would be preferable for you to use a special tropical plate, of which there are several on the market. The next best course would be to adopt a special tropical developer, by which I mean a reducer, such as amidol, which requires no alkaline salt such as carbonate to accelerate it. Before developing, place the plate for three minutes in a solution of formaline—one part to sixty parts of water. This, of course, is a hardener and prevents frilling or softening of the emulsion. Potassium permanganate is a good eliminator of hypo, provided the solution is renewed until the color is not quickly discharged by the hypo. I must confess that my preference, however, is for a solution of hydrogen peroxide—one dram in five ounces of water. In this solution the negative is ready for drying within three minutes of fixation.

J. M. W.—**"Transferotype," is a special kind of bromide paper** widely used many years ago. It was prepared on one side with soluble gelatine and with a specially-hardened sensitive emulsion. The wet bromide-print was squeegeed face down on the support where it was intended to remain; hot water was poured on the back of the print which melted the soluble gelatine and released the paper, leaving the image.

I understand that you have a formula for the emulsion-coating, but want a formula for the soluble-coating. This coating is the same as that used for double-transfer paper in the carbon-process. A thick coating of gelatine is required and this is obtained by two or three coatings of gelatine-solution used for the single-transfer paper, no hardening-solution being employed. Prepare a solution of gelatine—one ounce being soaked until soft and then dissolved by heat and made up to twenty-five ounces of solution. Gelatine should be applied to the paper as evenly as possible by means of a flat brush or sponge. The brush should be taken first along the sheet of paper and then across it, and finally diagonally, so as to avoid ridges and render the coating even. Second and third coatings must not be applied until the first and second coatings have become thoroughly dry.

H. E. F.—**The double outlines in your print causing a lack of distinctness** are due to displacement while examining the same during the printing-process. You should be careful not to move the back of the printing-frame when lifting a section of it to watch the progress of the printing.

If, however, you use developing-paper, then the double outlines are due to motion of the camera during exposure, as you say that you used it on a light extension-tripod, and gave several seconds' exposure with bulb. To overcome this, use a tripod that has a wide, solid top, such as is provided with a wooden tripod, and which is also cheaper than the compact metal kind.

E. W. W.—**"Bergheim" and "Bergheil" are distinctly different names,** and should not be confused. The former is a type of photographic lens which gives a soft-focus image, and is made by an English optical firm; the other is a style of light and compact tourist's camera made by the Voigtländer & Sohn Optical Works. The word "Bergheil" is a form of greeting popularly used among Swiss mountaineers.

E. J. G.—**An aplanatic lens, or aplanat,** is a lens sufficiently well corrected for chromatic and spherical aberrations to define well at a large aperture. The name is now usually applied to lenses of the rapid rectilinear type, although a special lens called a "rapid aplanat" (F/6.5) was introduced by Steinheil in 1893. This somewhat resembled the antiplanat of the same maker in having a positive front- and negative back-lens, but consisted of five glasses.

PRINT-CRITICISM

Address all prints for criticism, enclosing return-postage at the rate of one cent for each two ounces or fraction thereof, to Correspondence Department, PHOTO-ERA, *367 Boylston Street, Boston, U. S. A. Prints must bear the maker's name and address, and be accompanied by a letter, sent separately, giving full particulars of date, light, stop used, exposure, developer and printing-process.*

WARREN, A. M.—Your snapshot of a very small boy in a dark bathing-suit, near the edge of a pond, is a happy bit. Artistically, it has little merit, as directly above the head of the child appear a large tree and a boat—producing a perpendicular line or marked dual interest. The tonal effect is extremely harsh, the shadows being too deep and the highlights too bright. This could have been overcome by using a diluted developer and also by printing on a softer paper.

A. E. E.—"Morning Splendor," evidently an effect of sunrise, is well spaced, and tonally and pictorially very pleasing. As a composition, the picture has one striking fault. The distant hill, topped by a glorious sky, and itself being placed over a pond with a boat in the lower margin, would be quite sufficient; but you have spoiled all this by including, in the near foreground, a scow loaded high with barrels. This feature is superfluous, and seriously detracts from the rest of the picture which already contains dual interest, as you can see. Eliminate carefully, on the negative, this loaded scow, and the composition will be simplified and improved materially.

S. H. J.—Protruding ears of sitter is a matter difficult to manage even by professional portrait-photographers. The successful artist manages this physical difficulty by turning the head so that the defect will be partly concealed, also by casting one or the other in a deep shadow by means of a screen. By experimenting on a person who is thus ill-favored—but proceeding tactfully in order not to reveal your design—you will be able to observe the best point of view. By lighting the head strongly from a certain direction, avoiding diffused illumination, you will doubtless be able to solve this problem. Please make a few experiments and send them to us for comment.

M. C. S.—"The Path to the Old Mill" is an attractive subject, to which you have done full justice. The only exception is the proportions of the picture, and the halation of the foliage against a tensely white sky. The foreground is taken up by a sunlit path edged by foliage and shrubbery, and leads up to the old mill itself. For this reason, the distracting and scattered mass of white and halated foliage should be modified, if not entirely eliminated. You may yet be able to correct this disfiguring portion of an otherwise very pleasing picture.

B. R.—Your "Path in the Woods" is very attractive, pictorially as well as technically. It is well balanced, although somewhat symmetrical; but the objects in the extreme distance are just as sharp as those in the foreground. The picture should have been focused so that the most distant objects were less sharp than those in the foreground—a gradual decrease of sharpness from the trees in the foreground to those most distant.

R. B.—Your flower-study shows no attempt at composition or harmony, the white and dark masses being scattered indiscriminately throughout the picture-space. Your problem is a very difficult one and should be avoided rather than chosen. Why not omit the very dark-colored flowers and use only the white or light-colored ones, or *vice versa?* In either case the light should be controlled and full exposure given. Your picture is considerably underexposed. With the small stop you used, at least 25 seconds, or even 30 seconds, would have been better than the 2 seconds you gave.

H. E. W.—"A Hillside Path," representing the trunk of an oak-tree at the right, and a path at the left with light trees and hillside in the distance, is exceedingly well composed, lighted and broadly treated. The values are very good indeed. There is just enough softness in the print to yield a very pleasing effect. In printing, the top part of the tree—which extends above and beyond the limits of the picture-area—could be made lighter, and logically so, as the branches which cast this heavy shadow on the tree-trunk are beyond the range of the picture. The mass of foliage, in the upper right-hand corner, near the tree-trunk, is needlessly black, and could be lightened to good advantage. With these modifications, made quite easily, the picture would improve immeasurably and be worthy a place in a photographic salon.

"An Autumn Morning" is very similar in construction to "A Hillside Path"; but contains a number of scattered masses of lights and blacks, thus marring the interest of the picture. It is not so well arranged as the other subject, and not in the same class with it—from a pictorial viewpoint. You have certainly a marked taste for pictorial composition, which, with more study and practice, will lead to better things.

W. H. S.—Your picture of oaks in diagonal perspective, made in the middle of August, is very good of the tree-trunks themselves; but the sunlight on the grass is dazzling white, without any detail or gradation. These masses of white resemble rather pure white snow, chalk or sugar, or any other white substitutes, but least of all do they bear any resemblance to grass.

L. A. P.—Try a Rexo Normal instead of Hard paper on your photograph of a stag, and you will like the result much better.

S. S., JR.—Of your several prints "An Old New England Homestead" is decidedly the best; the viewpoint is good and the picture well spaced, also the sky is to be commended. Several of your other subjects indicate overdevelopment, with consequent chalky highlights. You will find, however, that the use of softer-working papers will mitigate this defect to quite an extent.

A. J. W.—Your photograph of a painter at his easel might be worked up into an attractive subject by enlargement on a softer-working paper and by trimming off the straight tree-trunk at the right. Possibly it may be necessary, also, to lower somewhat the tone of the stones along the bank of the stream.

A. J. V.—Underexposure and overdevelopment are the faults in the "Willow" and "Lake-View." The negative of "Snow and Shadows" is apparently too thin or too flat; perhaps both.

G. E. O.—You have an attractive little photograph in "Kenneth," but it should be so trimmed as to leave a slight space above the head.

S. A. C.—"Morning" is an interesting subject; but a little more light on the shadow-side, with consequent detail, would have improved it. Also, the background is somewhat too light, and particularly the papers on the desk, evidently due to much too intense a light.

E. M. R.—While your prints are of average technical quality the subjects are not of great interest or the compositions particularly attractive. We would suggest that you read carefully such a book as Poore's "Pictorial Composition" as an aid to the selection of subjects and the composition of the subjects.

OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Successful Criticisms

"The Spirit of Spring" wholly fails to justify the title and provokes in the mind of the beholder a number of unanswerable questions. How does a Dutch peasant-girl, with clogs on her feet and a market-basket on her arm, find herself in a typically American wood? Where is the path to or from market which brought her there? And what caused the ripple in the water at which she is gazing? If a fish, where is it? If a stone, who threw it? And what is the light patch at her feet, sunlight or a spot on the negative? And did we guess right when we spoke of clogs and a market-basket? The photographer is responsible for the last two questions, and lack of harmony between the figure and its surroundings for the others. The scene itself has many possibilities; but some of the water in the foreground could be spared.

Edgar T. Zook.

The figure is gracefully posed in a picturesque setting; but so nearly equal in softness of definition and in tone are figure and background that the young lady is almost lost in her surroundings—except for hood, collar, apron and foot-apparel, which are offensively prominent. The face should be rendered much lighter and the dress should be of a lighter shade. The reflections in the extreme foreground form distracting highlights and, in removing this portion, trimming up to the point where the shore-line meets the left margin, one also improves the line composition. The reflections of the feet remain and should be suppressed. A half-inch can well be spared from the left margin of the print, and this trimming will restore correct proportions to the rectangle. The pleasing highlights of the circular ripples will nicely balance the figure.

Robert T. Chadbourne.

How did the model get thus in the depths of the woods, so far from human habitation? Did she come for water? Where will she take it to when she gets it; and is that a Dutch water-pail just beneath her right elbow or a bundle of clothes? Why the ripples? Did the model cause them through an idle casting of stones, and why should she do this? In other words, the beholder does not clearly grasp the motive, due to one of two things. Either the model was short on interpretation or the photographer was long on oversight. The mass of highlights in the immediate foreground possesses almost as much power to attract as the model. It can be penciled down somewhat or



THE PICTURE CRITICIZED THIS MONTH

trimmed out. The trimming should take seven-eighths of an inch from the bottom and one-half of an inch from the left side.

FRANK KING.

THE following defects suggest themselves: the circular ripples are unaccounted for, whereas the reflected sky is brighter than the sky itself and is somewhat distracting. With the exception of the two trees on the extreme right, the lines of trees are too strong for balance, and one of them continues the vertical of the figure out of the top of the picture. One feels the lack of an exit and must in the end back out of the picture. The lines of the feet and legs of the model make an unpleasant angle with the reflection.

The picture fails to express its title—how many would have so named it had it been published without a title? Technically, the work seems rather good and the tone is very satisfactory. Why not trim off the top and bottom and make a postcard of the middle section?

E. H. SMITH.

COVER over with the hand all of the print below the circles in the water and you have a picture that, from the point of view of composition merely, is not bad. There is, however, a suspicion of "pose" in the human figure, the tones are too flat and the foliage seems almost to touch the lady's shoulders. The object of a picture is to convey a message—a simple, clear, direct message. Every thing that confuses or perplexes the observer is bad art. Remove the hand from the lower part of the print and you will see the result. The patches of highlights add nothing to the general scheme of the picture, but distract the attention, puzzle the beholder and weaken the "story" intended to be conveyed.

E. L. C. MORSE.

THE lower quarter of the picture should be trimmed off by a cut through the upper corner of the reflection of the apron to remove the distracting reflections and to break up the geometrical centering of the figure. There is too much sameness to the tones of the picture; the figure needs a little more emphasis. The purpose of the circular ripples is quite obvious—since the figure carries a basket on the right, or throwing, arm—thus destroying the unity of thought in the picture. The two trees at the right-hand margin break up the parallelism of the trees in the background in a violent manner, and the trees above the figure make with the figure a line which divides the picture into two uninteresting parts. The best feature of the picture is the softness of the background which suggests spring-time very well, indeed.

CLARENCE A. PIERCE.

OUR ILLUSTRATIONS

WILFRED A. FRENCH

In contemplating the work of Dr. Kilmer, the connoisseur is tempted to employ only superlatives to express his admiration. Professional portraitists seek his society, for they recognize his supreme mastery in photographic portraiture, and would learn from him. Secrets he has none, for in all his writings in PHOTO-ERA he has spared no pains to explain his method of procedure. Although photography is his hobby, his arduous and manifold duties as a medical practitioner, increased greatly by exigencies of the war, offer him little time to exercise it. However, when an opportunity presents itself, he works with great rapidity. Indeed, at such times he seems at his best, for the result is marked by striking force, spontaneity and truth. The youth, whom he has here portrayed—see cover and page 301—had just finished a boxing-bout and, still stripped to the waist, with tousled hair, but sufficiently reposeful to yield a few seconds to the demands of the camera, he proved a successful model. In the fulness of physical vigor and manly intelligence, the youth suggested to the artist the type of the young soldier who has won the admiration of the world by his irresistible enthusiasm and dauntless courage—the Yankee fighter at the Western Front—"Young America." In solidity of construction, plastic beauty of presentation, and expression of vigor and determination, this last portrait of Dr. Kilmer's is masterful and compelling. Data: Evening; Cooper Hewitt light; 4 seconds; 8 x 10 Eastman View-camera; 18-inch Verito; F/5.6; 8 x 10 Cramer Crown plate; pyro soda; tank dev.; direct Artura print.

The chief charm of the frontispiece is the expression of love and affection of the young mother, which the artist has interpreted so happily. The picture brings to the mind a biblical theme associated with the birth of the Savior—an event soon to be celebrated throughout Christendom. Though there is a display of wealth and luxury—the very antithesis of the humble surroundings in the stable of Bethlehem—the feeling of maternal affection is none the less deep and sincere. The picture was made evidently in the home; but this should not have made it necessary to introduce into the picture the baby's elaborate afghan. Despite its individual beauty, it forms a distracting note in the otherwise pleasing composition. The form of the kneeling mother is adorable, and the illumination, producing true tonal values and delightful gradations, is the height of technical skill. The halftone engraving was courteously lent PHOTO-ERA by the publishers of the *American Annual of Photography*, in the 1918 edition of which Mr. Poynter's charming picture appeared. We are assured by Mr. Percy Y. Howe, the editor of the *American Annual of Photography*, that the 1919 edition will be particularly attractive and valuable. Data: 8 x 10 Camera; 12-inch Celor; F/5.6; Poynter Photo-Lamp; 8 x 10 Eastman Portrait Film; pyro; contact Artura Print.

William T. Starr, though an industrious and successful business-man, belongs to a small group of photo-pictorialists, in Portland, Me., whose members vie with one another in the exercise of their hobby. In the art of true picture-making, Mr. Starr is excelled by none of them. One of his strongest points is harmony and simplicity in composition, as manifested in his "Mid-winter," page 285. The theme is commonplace enough, but it takes on freshness and interest because of the intelligent application of artistic principles and breadth of treatment. Data: Heavy snow-fall; December 1, 1917; noon; vest-pocket camera; lens at F/7.9; 1/25 second; 8 x 10 enlargement on Eastman Bromide; M. Q. developer.

Examples of H. A. Brodine's pictorial work have not been seen in these pages for a number of years, his camera-activities having been curtailed for the lack of opportunity. He reappears as author of a helpful, practical paper, whose value is enhanced by a series of attractive, well-composed pictures. Mr. Brodine has always manifested an eye for true beauty, with no inclination to coarseness or eccentricity in the treatment of his subjects. He is very successful in the artistic assembling of parts and masses and imparts a spirit of refinement to his interpretations of landscape-subjects that is very delightful. These characteristics are displayed in a marked degree in the plates that are used to illustrate his remarks under the caption, "Pictorial Printing."

The decorated sketches that accompany Mr. Harrison's article reflect the vocation of the author, which is that of an architect and designer. They are quaint and unique in character and carry out the intent of the writer of a pleasantly imaginative journey into "Elfland." Data: July, 10 A.M.; good light; Anseo Vest-pocket ($1\frac{5}{8}$ x $2\frac{1}{2}$ size film); $3\frac{1}{2}$-inch Wollensak; stop, F/7.5; 3-time color-screen; 1/25 second; Eastman Ortho. Speed-Film; Metol; Azo contact-prints.

How many times, when taking a stroll into the country, on a cold winter-day, have we not observed a gracefully drooping spray of scarlet berries relieved against snow-covered surroundings—like the one pictured so skilfully by Alice E. Souther, page 302. The barberry, unless picked off by the lingering robin or catbird, clings tenaciously to its leafy, prickly bush and, long after blighting winter-storms, remains to gladden the eye—carrying the mind back to sumptuous autumn-days, months before. Data: Indoors; 3 P.M.; 5 x 7 Century-View; 8-inch R. R. lens; stop, U. S. 24; light from one north window; 20 seconds; 5 x 7 Standard Orthonon; pyro; contact-print on Azo A.

But defying the raging storms of sleet and snow, yet rarely succumbing, bending, but never yielding, stands the sturdy oak. Shorn of its thick and screening foliage, the proud old tree reveals its structural form—the secret of its strength. The oak, from Mr. Olcott's camera, page 303, stands in the vicinity of the famous Wayside Inn, Sudbury, Mass. The original print belongs to a series of photographs made by Mr. Olcott to illustrate his illuminating article, "Stormy-Weather Photography," published in PHOTO-ERA for February, 1917, but omitted for lack of space. Data: February 3, 1913; 1 P.M.; dull light; 5 x 7 Century Camera; B. & L. 7-inch Protar; stop, F/16; 1/5 second; Cramer Iso Inst.; Rytol; contact Velox print. The exposure was made during a driving snow-storm—so thick that the Inn (seen faintly at the end of the road, at the right) was scarcely visible. An umbrella was held close above the camera and suddenly lifted for an instant before exposure. This was necessary to keep the drifting snow off the lens.

Were it not for the title ("Wistful") the pretty, black-eyed little miss, pictured on page 305, might be assumed to evince a degree of shyness while submitting to the ordeal of being photographed. Mr. Jordon, a professional portraitist, has certainly produced an engrossing child-study, in which he displays much technical skill. Of course the white costume—white from top to toe—had to be; and the usually disfiguring light hair-ribbon seems a fitting counterpart to the "anklets" of the same hue. A little "more or less" would have given the frock and footwear the benefit of a more modulated character. The fleshtints throughout are admirably correct. Data: In the home; September, 2 P.M.; light (natural) poor; 6¼ x 8½ Eastman View-camera; 12-inch Velostigmat used at F/4.5; ½ second; 6½ x 8½ Polychrome plate; Duratol; contact Artura print.

Beautiful in design, poetic in sentiment, delightful in accomplishment, epitomizes my verdict of Mrs. Cassidy's flower-study, page 307. The artist seems to have surpassed herself in achieving this picture, composed of three little white roses, grouped with sweet simplicity and made to express a tender thought which the imagination easily could associate with some personal sorrow or bereavement. But one should also admire the eminently artistic qualities of this modest, but appealing achievement—the grouping, lighting, spacing, treatment, which merit admiration and study. Data: April, 12.30 P.M.; sunlight; 5 x 7 Graflex Camera; P. & S. Semi-Achromatic; 12-inch focus; stop F 6.5 x 7 Standard Orthonon; tank, Eastman powders; contact-print, Eastman Standard Rough Bromide.

Though made recently, the portrait of the young girl, page 309, seems to suggest the period of the daguerreotype, largely because of the arrangement of the hair, the general pose and the slightly vacant gaze. It was awarded Honorable Mention in a PHOTO-ERA competition devoted to home-portraiture, not long ago, and is published on account of its quaintness and generally good qualities. Mr. Gardner is a capable professional portraitist with a hobby for outdoor genre-work. Data: In the home; January, 11 A.M.; bright light; 8 x 10 View-camera; 12-inch Plastigmat lens; stop, F 8; 8 x 10 Standard Imperial plate, pyro; ½ second; contact-print on Artura Iris E, rough.

No; the noble interior of Chartres Cathedral, France, is not by Evans, the eminent English architectural Photographer, but by an American, whose name we failed to obtain. Fortunately, the picture represents this magnificent edifice, not as it was before the Huns demolished it, but as it is to-day—intact and inspiring within and without. This cathedral is one of the few great ecclesiastical monuments in France, the one at Amiens, though slightly injured, ranking first. The light is well distributed, and the massive column in the foreground forms a substantial balance for the rest of the picture. Negative made on Eastman Portrait-Film.

Advanced Workers' Competition

THE lonely vagabond, pictured by Paul Wierum, page 313, may well be said to be "all in." The feeling of moral indifference is well expressed; and, as for his great "sole" no prayers or excuses need be offered, for there is little if any optical distortion in the left foot in view of the fact that, unlike its mate, it is encased in an ordinary shoe stuck into a large rubber overshoe (generally known as a galoshe). The placement of the figure and the general tonal effect are admirable. Data: July, 5 P.M.; medium light; No. 1 Special Kodak; 3½-inch Zeiss Tessar Ic.; stop, F 4.5; Kodak film 2¼ x 3¼; 1/25 second; tank-developed; enl. on Artura Carbon Black, Rough Buff.

Mr. Phister deserves much credit for choosing so unusual and, at the same time, so instructive a theme, as an aspect of the maple-sugar industry, page 315. Many people know that the sap is obtained from the tree, but not in what manner. The sturdy trunk of the maple and the relatively dwarfed figure of the boy, form a striking contrast. The general treatment of the subject is highly commendable. Data: March 17, 11 A.M.; bright sunlight; 4 x 5 Century Camera; 6¼-inch R. R. lens; U. S. 8; Ideal color-screen; 1 second; Standard Polychrome; pyro; enlarged on Velours Black.

The element of originality gives Mr. Zwarg's genre, page 316, special interest and charm. The soft, diffused illumination is very pleasing, as is also the succession of planes and the striking low-toned background. There is no monotony here. The attitude of the boy, as he allows the fine stream to trickle through his fingers, is extremely well done. The values and the drawing are eminently true. Data: August, 5.30 P.M.; bright yellow light; 4 x 5 Premo; 3¼ x 4¼ Seed Graflex Plate; pyro-soda; 6½-inch Planatograph lens; stop, U. S. 8; 1/5 second; enlarged on Artura Carbon Black.

Beginners' Competition

THE quiet pastoral, page 319, is an uncommonly good piece of work from a beginner. It has all the appearance of mature artistic experience, the general arrangement, the setting, illumination, and management of planes. The faults are insignificant in comparison with the picture as a whole. The least satisfactory part of the picture is the "busy" foreground, although the reflection of the animal, itself, is not objectionable. The sky with the poorly drawn foliage could be easily spared, and its removal, by trimming, would give a picture of better proportions and simplify the present scattered interest. Or, the entire foreground could be eliminated, thereby producing a similarly reposeful and well-ordered composition. Data: August; noon; bright light; Autographic Brownie No. 2; R. R. lens; U. S. 8; 1/25 second; Ansco Speedex Film; M. Q.; enl. on P. M. C. No. 2 Bromide.

Mr. Cline's pretty road-view, page 321, is hackneyed in motive, but meritorious in workmanship. After having noted the remarks with regard to trimming—in "Our Contributing Critics"—Mr. Cline will eagerly reduce the foreground of his present print by one inch and be delighted with the instantaneous improvement. Data: July, 2 P.M.; bright sunlight; 3A Ansco camera; 6¾-inch Modico Anastigmat; F/7.5; stop, F/16; quick bulb-exposure; Seed L. Ortho.; pyro, tank; print on Azo E Hard, Medium.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is, "A Game of Checkers," by M. C. Still. To assist at a better understanding of the composition, the following data are supplied: 8 x 10 View-camera; 12½-inch Wollensak Rapid Symmetrical; stop, F 11; flashlight; 10 grs. Victor Powder; 8 x 10 Standard Orthonon; pyro, in tray; contact Cyko print; developed with Celeritas.

IT is bad taste to try to capitalize your patriotism. At the same time it is foolish to let anyone think you are a slacker.—*The Spatula.*

ON THE GROUND-GLASS

WILFRED A. FRENCH

A Prodigious Appetite

A DAILY, published not far from Boston, takes PHOTO-ERA to task for stopping to use the hyphen in words written usually as two separate words, quoting from a recent issue of our publication such compound words as, focusing-cloth, printing-frame, fixing-bath and drying-rack.

Our neighboring critic does not seem to appreciate the value of clearness and consistency, for he must know that frames do not print, racks do not dry and cloth does not focus. Indeed, his very issue that contains the hypercriticism commits, in large type, such an oddity as "New Rules for Eating Places." Somebody appears to have a prodigious appetite.

Aërial Lenses Eight Inches in Diameter

PHOTOGRAPHIC workers familiar with the telephoto-equipment used in the aërial service read with astonishment in Mr. Beebe's article, "Battle-Photography," in *Scribner's Magazine* for October, about an allied airplane carrying a camera fitted with a lens 8 inches in *diameter*. The camera thus equipped was used in Belgium, and did some wonderfully effective work. Still, many readers were extremely skeptical about the report of these big lenses. They had heard of 4-inch diameter lenses being used on aërial cameras; but 8-inch ones? The question was submitted to the Editor who communicated with the author of the article, and from him obtained a signed statement to the effect that not only was the exposed portion of these huge lenses alone at least 8 inches across, but he personally had used the cameras, thus equipped, a number of times. Here is a case of apparently gross exaggeration that has proved immaculately true.

Spoiling Unexposed Films

THE average lady's handbag is a wonderful thing—wonderful on account of the heterogeneousness of its contents. The good woman meets an acquaintance in the trolley-car and, among other things, discusses vacations, outings and visits. Then the question of kodak pictures comes up. "Good gracious!" she exclaims with a start, "there are those films George gave me a long time ago to have developed and I've been carrying them about in my handbag ever since, meaning every day to take them to the 'kodak-man!' I must do it at once!" Hurriedly she enters the shop of the photo-finisher; eagerly she opens her hand-bag; nervously she digs among its contents, but without finding the long-neglected roll-films. At the polite suggestion of the "kodak-man," she carefully turns the bag upside down on the counter, and a confused mass of articles meets the astonished gaze of the proprietor. There are toilet-articles of every description, including smelling-salts, perfumery and a box of ointment; railroad and car tickets, charge-coins, eye-glasses, fountain-pen, knife, letters, keys, postage-stamps, lipstick, loose change and, last but not least, three separate roll-films bearing evidence of rough treatment.

"I hope they're all right," she says apologetically, but without remembering how many times she had rested that same bag with its sensitive films on radiators, cold floors and other places, at home and during her many shopping-tours, visits, calls and auto-rides in all kinds of weather. Virtually unprotected, those three little films had been dropped, knocked about and exposed to varying conditions of temperature, times without number, besides keeping long and close company with odorous substances.

The photo-finisher examines the rolls doubtfully, saying that he cannot promise satisfactory pictures, but he will do the very best he can. He does; and the results are absolute failures—fogged, streaky, spotted, not worth printing. Will not the ladies to whom such errands are trusted, exercise more care in the future? By doing so, they will contribute materially to photographic economy and to the happiness of others.

Stained Fingers

DESPITE the many known remedies for the removal of developer-stains on fingers, there are many workers who are indifferent to these evidences of darkroom activity. I know one photo-finisher who does not mind this digital discoloration in the least. Noticing the deplorable condition of his ten fingers, one day, I suggested to him that he restore them to their normal state, applying the simple remedy recommended by an English worker—first, potassium permanganate and then sodium meta-bisulphate. "What's the use," he replied; "no sooner are my fingers cleaned than they are stained again. Besides, as I go about a good deal, I consider it good advertising. Somebody will make a remark about my stained fingers and, inquiring into the cause, will know that I am a professional photo-finisher. It helps business. Thanks, just the same."

An Unsuccessful Snapshot

THE hunting-season in New England has been unusually active, this year. Many who enjoyed the sport were excellent marksmen; others proved very amateurish. Sam Harris, the well-known amateur photographer of Greater Boston, took advantage of the unusual wealth of game that prevails this year and, one Saturday noon, left his desk for a fortnight's shooting in the Wilds of Maine. Harris' photo-albums testify that he is a good shot with the camera; but with the rifle—well, that is a different matter. The fifth day saw him back at his desk. The reason? "Poor luck," so he said. The men in the bank, where Harris works, tactfully let him alone. One day, several weeks after his unlucky experience—he tells the story about himself with exhilarating frankness—he was delayed on his way to the train, and found it necessary to use a taxi. The chauffeur had a rather familiar look, so Harris said to him: "Excuse me; but aren't you Hoxie Smith, who was my guide in the Maine woods, not long ago?" "Sure I am," replied Hoxie. "Then what are you doing here, may I ask?" continued Harris. "Well, you see," drawled the former guide and evincing a peculiarly awkward movement as he took his seat in the cab, "I got sort of tired of being taken for a deer, so I came to Boston and took up chauffeuring. It's a darned sight safer, I can tell you!"

EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication

American Work and the Soft-focus Lens at the London Salon

In dealing with the American work, the first point that strikes the observer is the almost universal use of the soft-focus lens by American photographers. These semi-achromatic objectives are tools that have hitherto not been conspicuously successful in the hands of British workers, although here and there a knowledge of their right use is apparent. For those who are unacquainted with the soft-focus lens, of which there are several examples on the market, we may describe it as single in form with a large aperture: is corrected for chromatic aberration almost completely and partly for spherical aberration. The remaining uncorrected faults, coupled with the large aperture, enable it to produce an image possessing a quality of its own that is extremely attractive for a number of subjects, and equally objectionable for others. When focused correctly—a somewhat problematical and not too easy operation—it will be found that a fairly sharp image of the subject is formed, surrounded by a secondary image or halo, fuzzy in character.

Used with discretion, the soft-focus lens produces, with subjects containing a short range of tones in a fairly high key, and including a definite highlight or two, a rendering that appears to give the subject a roundness and modeling that can be produced in no other way. This envelope of light—it can be described in no other manner—is demonstrated perfectly in many pictures in the Salon.

A notable example, and one that exemplifies the right use of the lens at its best, is seen in the picture by John Paul Edwards, of California, and entitled "A Beach Frolic," a small print that might well be overlooked, a group of children running on a wide stretch of sunlit sands. Apart from the excellence of the composition and the rendering of motion that has been so well caught, the whole picture shimmers with light and atmosphere. Yet at a first glance the casual observer might describe the print as being fuzzy. A more careful inspection reveals the presence of the finest detail in the children and in the rest of the picture, but all surrounded with the envelope of light referred to. One almost feels the warmth that is so well suggested, and one knows that the sands over which the ripples are creeping are hot to the feet of the youngsters. This is a triumph of realism for pictorial photography: realism by suggestion. No purist of the sharp focus "hard as nails" school could possibly have produced anything half as good of the same subject. At best it would be only a bright snapshot.

Amateur Photographer and Photography.

Aerial Photography with Box-Kites

A new method of aërial photography being tested out before officers of the general staff at Washington may give Uncle Sam's armies in France an even more accurate and dependable set of eyes than those provided by the photographic section of the air service. At present photographs of enemy-lines and rear works are taken from airplanes. Airplane-photography, however, is both difficult and dangerous, for where there is anything worth photographing the enemy is always prepared to meet attempts to snapshoot his position or movements by concentration of anti-aircraft guns and by fast attack-planes. The result is that many planes and aviators are lost while engaged in photographic work. To complete the photographic record of any considerable territory, also, many pictures must be made and these carefully pieced together to form a comprehensive whole.

The new method, although it would not supplant entirely the necessity of airplane-photography, will, it is believed, enable comprehensive panoramas of the German lines to be made from points close up to the trenches and will cover a field virtually closed to cameras operated from airplanes or observation-balloons. The work can be done, too, without subjecting the photographer to unusual danger, and the only equipment of value that might be lost or damaged would be the camera itself. This system, developed and demonstrated before army-heads by one of the greatest photographic experts in America, involves only the sending up of from four to eight box-kites to form an aërial platform for the camera. These may be sent up from 500 to 4,000 feet, depending on the extent of the picture desired. The camera is then focused for the proper height, is hoisted and is operated from the ground. The kites may be sent up, in fact, from front-line trenches, the photographer and his assistant working in the comparative safety of trench or dugout.

The camera built for this work carries a film 22 by 54 inches—the largest ever used. At a height of 2,000 feet this film will record a panorama extending along a given line for 13 miles. Prints presented for study at the war-college here were so clear and sharp that, under a glass, objects could be identified easily for a distance of five miles back of the base-line. These pictures have the distinct advantage of presenting a great scope of territory all in one print, removing the difficulties and inaccuracies resulting from piecing together snapshots made from planes; they can be made from points of vantage close to the enemy-lines, and the necessity of risking the lives of valuable aviators and expensive airplanes in photographic work is greatly diminished.—*Abel's Weekly.*

Photography and Shell-Shock

Photography has often been dubbed "The Cinderella of the Arts." She has now, seemingly, in accord with the spirit of the times, donned the garb of nurse. We have been inclined to this opinion by what was told us recently by an officer invalided from the Front and suffering from shell-shock. Lack of equilibrium in mental and nervous centers characterizes this essentially battle complaint, and it is one of the most difficult to deal with from the physician's point of view. On the recommendation of a friend, this suffering soldier bought a camera, and in the neighborhood of his hospital had made a variety of snapshots of interest, including incidents of hospital-life. These he had developed, printed, and mounted himself, and, further, had made a series of lantern-slides with a view to a lecture. The mental concentration needed for this employment worked wonders. The exercise had been

sufficient to keep his mind and nerves steady, with the result that a fairly speedy cure had followed. As medical men are agreed that lack of concentration is the chief difficulty to overcome in most cases of shell-shock, the idea of taking up an attractive and not too difficult a hobby such as photography is worthy of considerable attention. There are few who are not likely to become speedily engrossed in the fascination of snapshooting, and making their own prints, particularly if it is realized that a useful art of real practical value is being acquired at the same time.—*A. P. and P.*

The Americans in the London Salon

In his "Personal Impression" of the recent London Salon, printed in the *British Journal* of September 27, 1918, Mr. F. C. Tilney manifests his admiration for the work of the American exhibitors in the following terms:

"If there is one thing that strikes the customary visitor more than another at the London Salon it is that the Americans 'have it.' One is roused to admiration time after time before prints which turn out on reference to have been sent from the great continent. Why many of the staunch supporters in this country should be conspicuous by their absence has not been explained; but it is not to the advantage of 'the old gang,' as a Carmelite would say, that the present show is so excellent in spite of its lack of home support.

It is possible that amongst the huge stacks of unhung prints the British contingent is quite fully represented. If so, that fact speaks for itself; and it behoves us to find a reason for the failure of British photographers to do work which can win places of honor in a British show organized by British experts.

A charitable theory would be that America is a large place, and the British Isles a comparatively small one; that every photographer of any note is eager to be represented in London; that a small proportion of enthusiasts in America's millions would be enough to swamp a larger proportion of our enthusiasts here.

Personally, I am not sorry that it is so; for American work has always appeared to me to be virile, trenchant and unsophisticated; whereas, in later years, it has also been less impudent than our own. British work has certain very obvious characteristics. It is conscientious, but with a sort of sheeplike conformity to safe custom. When it kicks over the traces—which I admit is not a custom of sheep—it does so without rhyme or reason. Its developments do not seem to be on legitimate lines, but are simply a mad change of plan. It takes a very strong man to work out his salvation by dogged perseverance on prearranged lines. A few such strong men are with us still doing slightly finer work every year. The less strong are always in a hurry, and ready to try any passing 'stunt' that will whisk them into popularity. A favorite resource is to imitate the American freshness of view; but that is a thing to possess, not to imitate.

The American is really a very simple person. His method of approach is that of a guileless child. That is why things that ruffle our sense of propriety in American work are attributed in the first place to American advertising proclivities; but in the end turn out to be the honest efforts of quiet-spoken and very modest enthusiasts."

Strangely enough—and with all due respect to Mr. Tilney, and to the English pictorialists whose work has had no more ardent admirer than the publisher of Photo-Era—just as he was about to send Mr. Tilney's tribute to the printer, he received a batch of European mail, the *first* letter being an order (together with a money-order for 4/6) from an English photographer for a copy of the book, "Why My Photographs Are Bad!"

Please Write Your Name Legibly

The importance of writing one's name clearly, particularly in matters of business, is shown by the fact that several governmental departments require absolutely that the signature to any order, document, requisition or communication be *typewritten.* The necessity of this ruling is obvious.

Photo-Era has among its files, awaiting attention, a number of letters, orders and photographs, many of the latter having been entered in several of our competitions. Unfortunately, the names of the senders are written so hurriedly, or with the intention to preserve a characteristic signature, as to be entirely illegible—except to the signers themselves.

Moral: be reasonable, when certain of your communications remain unanswered; or, to ensure attention, *typewrite your signature!*

Notice to Members of the American Lantern-Slide Interchange

In order that slides, contributed to the Interchange, may be returned to their owners promptly, kindly notify Mr. O. C. Reiter, of any slides you may have in your possession or slides that have not been returned to you.

Yours respectfully,
O. C. Reiter,
2424 Penn Avenue,
Pittsburgh, Pa.

Apologies to "The Walrus"

In reading, in cold type, our quotation, "An English View of Photo-Profiteering," printed in the October issue of Photo-Era, we read with consternation that some one made the erudite and well-informed writer of "Piffle" responsible for the following statement: "Do you know what a sovereign's worth to me nowadays? About two-and-nine (*29, instead of 20, shillings*)." The italicized portion is an explanatory addition and a double "bull." Some kind and helpful soul interpreted "two-and-nine" as being two pounds, nine shillings, or 49 shillings; whereas two and nine (2/9) means two shillings and nine pence—about 66 cents in U. S. currency. Our apologies to "The Walrus."

Chicago Camera Club

The Chicago Camera Club has begun the current season's activities with commendable enterprise.

The latter part of October Mr. W. C. Rowley—who will be remembered by Photo-Era readers as an interesting writer and illustrator of camera-tours in Europe, before the war—prepared an interesting travelog for members and friends of the club, the subject being the Grand Cañon, Yosemite Valley, Southern California and the Canadian Rockies, and illustrated with lantern-slides of Mr. Rowley's own skilful making. The coloring, notably true, was done by a local expert. The lecture, itself, was delivered by Mrs. Rowley.

An exhibition of fifteen superb carbon prints, by William A. Guyton, Jr., an eminent pictorialist of

Chicago, was held at the club for a period of four weeks, beginning with October 15. The notably artistic qualities of Mr. Guyton's work received merited praise from art-critics of the local press.

The club is co-operating with the Los Angeles Camera Club, in its interchange with other camera clubs, in what is known as "My Best Print" collection. The idea is a good one, and should prove a great stimulus to all camera clubs who are fortunate to see them.

Sample Copies of Photo-Era

In the past, we have always been glad to send sample copies of Photo-Era in response to requests. To-day, conditions over which we have no control, have compelled us to discontinue this practice. In compliance with governmental regulations with regard to paper-conservation, we print enough copies of Photo-Era to meet the demands of paid subscribers, photo-dealers, advertisers, news-agencies, and no more.

Requests for sample copies cannot be honored unless they are accompanied by twenty cents in stamps. Perfect copies of Photo-Era will be sent promptly, postpaid, in response to all such requests.

Sale of Halftones Published in Photo-Era

With the approach of the holiday-season, there will be considerable activity among photo-pictorialists in preparing prints for Christmas gifts and other purposes. Many amateurs have been printing some of their favorite subjects on postcards. With this end in view, several workers whose pictures have been reproduced in Photo-Era have procured from us the original halftone-engravings which they are utilizing, advantageously, in many ways.

One amateur, of our acquaintance, is now using the halftone of one of his successful pictures published in Photo-Era, several years ago, for the purpose of decorating his stationery (full-sized letter-heads) together with the legend, "Was awarded second prize by Photo-Era The American Journal of Photography."

If the halftone block is the size of a postcard, or even smaller, it can be used by a good printer in the preparation of picture-postcards. If the block should be a little larger than $3\frac{1}{4}$ x $5\frac{1}{2}$ (size of a postcard), it can be easily cut down to the required size.

Any workers whose pictures have appeared in Photo-Era during the last five years, or longer, may have these perfectly good halftone blocks at *one-half the actual cost* to us, provided they will procure them from us without delay.

Mountain-Photographs by Vittorio Sella

The photographs of mountain-scenery, made by Signor Vittorio Sella, of Italy, of the Alps, the Caucasus, Equatorial Africa and the Himalayas, have long been celebrated for their wonderful clearness, brilliancy and accuracy. Most of them are made from great elevations, 10,000 to 22,000 feet, and at distances varying from several to 75 miles, of course, with the aid of a powerful telephoto-lens. Signor Sella generally employs several large equipments, 8 x 10 and 11 x 14—making direct exposures—which, together with the necessary paraphernalia and accessories, constitute heavy and cumbersome loads which are carried up those dizzy heights by expert mountain-climbers. Thus, the ordinary expedition comprises Signor Sella and a retinue of a dozen carriers. On several occasions, Signor Sella accompanied the Duke of Abruzzi on mountain-climbing expeditions in the Himalayas and Equatorial Africa, and procured a large number of magnificent and valuable negatives.

About twenty-five years ago the Appalachian Mountain Club, of Boston, obtained a large collection of Signor Sella's photographs and exhibited them to its members and friends, when they created a sensation among mountain-climbing enthusiasts, photographic experts and artists.

Recently, Signor Sella sent over 250 of his choicest prints, to be sold for the benefit of the families of guides and other mountaineers killed or wounded in the defense of the Alpine frontier of Italy. These pictures were displayed in the gallery of the Boston Art Club, November 4–6, where they were sold at auction. The sum of $600 was realized from the sale of 150 of these prints, which brought $5.00 to $30.00 each. The rest were sold at the rooms of the Appalachian Mountain Club and yielded a substantial sum. The total amount realized from the sale of Signor Sella's photographs exceeded expectations, and was promptly forwarded to Italy to aid in relieving the distressed families of Italy's brave soldiers.

Our Contributing Critics

Owing to the number of excellent criticisms sent to Our Contributing Critics department this month, the rules governing criticisms submitted were crowded out, and we are obliged to give them here, viz:

Many of our pictorial contributors evince so high a degree of intelligence in their criticism of pictures in general, that, in order to stimulate and help develop this valuable faculty, we have introduced this competition. It consists of the reproduction of a photograph lacking good composition. To him who sends us the best criticism, before the twentieth of the current month, we will send, postpaid, a copy of "Pictorial Landscape-Photography," by Paul Lewis Anderson; price, $1.50. In the event of several criticisms (not exceeding three) being satisfactory, they, too, will be awarded copies of the book.

The successful replies, not to exceed one hundred and fifty words, together with the picture criticized, will be published on this page in the second succeeding issue.

The subject of composition in landscape-photography is one that interests every camerist. Naturally more exposures are made of landscapes than of any other outdoor-subject. The main thing to be remembered is the principle of simplicity and harmony. Mr. Anderson is an eminent exponent of pictorial photography in its highest sense, and he has never appeared to better advantage than as the illustrator of his book.

Non-Receipt of Photo-Era

It should be unnecessary to remind subscribers of Photo-Era that its publisher is doing his very best to overcome conditions brought on by the war. Nevertheless, there are some who have held us to task for the non-receipt of Photo-Era.

We take this opportunity to remind our friends that the draft, epidemic of influenza and general shortage of skilled labor have affected seriously the personnel of our bindery and its mailing-department. Despite every effort to maintain the usual efficiency, inexperienced workers *had to be employed* to replace those taken by the draft or by illness.

Subscribers who fail to receive their copies—*after liberal allowance for mail-congestion*—should write us and we will see to it that a duplicate copy is mailed.

PHOTOGRAPHIC THRIFT

Photo-Thrift

Amateur and professional photographers are just as eager to help win the war as those engaged in other activities. The saving of time and material is vital. Photo-Era leads—more often than it follows—a worthy cause. In the present instance we believe that Photo-Era is establishing another precedent. Surely, our readers must know many methods whereby a saving of time and material may be made. Now is the moment to give photographers the benefit of personal experience with regard to the saving and the economical use of plates, films, developers and accessories. If one ounce can be made to do the work of an ounce and a half—*that one half ounce is worth saving!* If the use of a 4 x 5 kit in a 5 x 7 camera may be used to advantage to save plates and developer, we will welcome such information in this column. Moreover, to show that we appreciate the efforts of Photo-Era readers, we will give a six-month subscription to every contributor whose letter we consider of practical photo-saving value. We hope that readers of Photo-Era will realize that this new venture depends upon them for success. It is a patriotic effort to help amateur and professional photographers save in every way possible. It has a direct bearing on winning the war and deserves hearty support at once. Make every contribution as brief as possible—not over one hundred and fifty words. Paper and ink must be saved; and we ask contributors to bear this in mind. Now, let every reader get down to business and send his contribution not later than the twentieth of the current month.

Practical Saving-Methods

To the Editor of Photo-Era:

The idea embodied in your new "photo-thrift column" is excellent and it should be of benefit to the entire photographic fraternity. In common with many photographers I have been obliged to economize in every way possible. Trays, especially the larger sizes, are expensive. I found that a visit to the kitchenware-department of the nearest ten-cent store resulted in my obtaining some very good enamel dishes and pans. These I painted carefully with a waterproofing-preparation. As soon as the paint was dry, I found that I had obtained a very serviceable set of trays at small cost. Virtually trays of any desired size may be obtained in this manner, and a visit to the kitchenware-department of a large store is a revelation.

Very truly yours,

James W. Stratton.

Editor of Photo-Thrift Column:

I am an amateur camerist and expect to profit greatly by reading your thrift-column. I cannot offer any practical suggestions for same, but think that my attempts to help economize in other ways, may be of interest to other amateurs who are situated as I am. I am stenographer for a well-known commission-merchant who appreciates the importance of economy. All twine, cord, paper, cardboard boxes and nails are carefully saved. It amounts to a lot, and we don't need to buy material with which to do up our packages. For my individual part, I save all full-sized letterheads and carbon-copies from accumulated correspondence before they are discarded. Most circulars received from business-firms, banks, charitable organizations are blank on the reversed side and, therefore, are also saved. This yields us a plentiful supply of paper for my carbon-copies and memoranda, and for the proprietor on which to prepare his "copy."

Besides, most of the incoming material (paper, twine, etc.) is of superior quality, difficult and expensive to procure, nowadays. After it has done service a second time, correspondence-paper is saved, and sold (at present price) for one dollar, or more, per hundred pounds.

Respectfully yours,

Alice U. Bradley.

Editor of Photo-Thrift Column:

One of the most expensive of photographic processes to-day is that of developing enlargements, especially when using a large number of negatives, when it is necessary for the tray of developer to be exposed to the air for some time and thus lose its strength. The expense can be reduced to the minimum if the two following steps be practiced. First place the bottle of developer in a basin of water of the desired temperature. By so doing the temperature can easily be kept where desired by using bits of ice in hot weather, and hot water in cold weather. Into a small sauce-dish pour an ounce of developer. After exposing the paper, immerse it in water of approximately the same temperature as the developer, then place it face upward on a plate of glass, a piece of oil cloth, or better still, a shallow tray. Saturate a wad of absorbent cotton in the developer, then with quick strokes swab the face of the paper and keep on with this process, frequently re-saturating the cotton, until the image is fully developed. After each print is developed, mop up all free developer from the tray, with another wad of cotton, and squeeze it over the sink, so that there will be no discolored developer left in the developing-dish to discolor the succeeding print. This method will not only be found economical, but useful for other reasons such as bringing up one part of the print and holding back another part. Second, use strips of paper one inch by two inches as test-strips, and print from the most important part of the negative.

Spoiled prints may be used as mounts by sticking prints to their backs. The result will be flat, heavy prints with white margins. Discarded negatives may be cleaned by immersing in a warm, strong solution of sodium sulphite, then wipe dry and use for passe-partouting desirable pictures; or they can be sold to M. W. Carr & Co. of West Somerville, Mass.; or if large enough, they can be used as window-lights, and picture-frames. Plates and films may be saved by the use of a good exposure-guide for it will save many spoiled results. This one step alone, if practiced by all amateurs, would mean an immense saving in a year, for the best of amateurs on a vacation are bound to miss out on many exposures if a meter is not consulted.

Very truly yours,

George W. French.

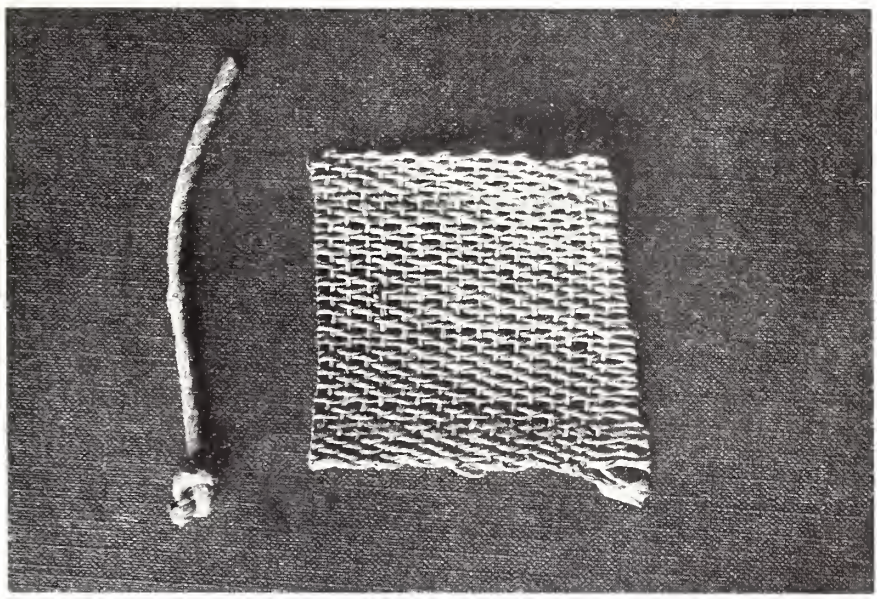
LONDON LETTER

CARINE AND WILL CADBY

SURELY, one may now accept the fact that the London Salon has weathered the war. Its exhibition opened again on September 14 with an excellent show of 365 photographs. If the judging is, perhaps, not quite so rigorous as in pre-war days, it is still something of a triumph to get such a collection together at the present day.

The Private View was held on September 13 at the old gallery in Pall Mall. It is curious what a person-

Tommies at Victoria Station, called "The Gate of Good-bye," and a fine picture of two survivors from a torpedoed ship in an open boat. "But how does one know this?" the reader may ask, and the answer is that Mr. Mortimer has somehow conveyed the impression so convincingly in the attitude of the figures as to allow no delusions that this is a joy-trip. Mr. Mortimer calls it his propaganda work. "However did you get it?" we asked him, but he was not to be drawn.



GERMANY'S USE OF PAPER — CARINE AND WILL CADBY

ality of their own these functions have, and how little they resemble each other. Those held in the last few years have been rather under the shadow of the war, and they have made us realize the absence of many old friends, despite the efforts made by every one to be normal and optimistic. This year, it was different; there were still more missing, but there was a cheery assuredness about the atmosphere and a readiness to be pleased. In spite, too, of being in the fifth year of the war, there is much less pictorial evidence of its existence than in the other three exhibitions.

Certainly, two very striking and technically perfect prints of battle-planes among the clouds (official photographs) came in, and were hung on the very morning of the Private View; but with this exception, there is little sign on the walls of Britain's or any other country's "great effort." Even Mr. Mortimer's sea-picture is a peaceful one called, "Safe in Port"—a happy omen, surely, for the near future. Beside this and a portrait of Lady Carnarvon, he has only two other exhibits, both appealing to the emotions: a crowd of

The exhibition is hung in the same way as last year with screens down the middle of the gallery. The prints were again sent in unframed—a labor-saving device for exhibitors and a labor-making one for those who hang. It was even worse this year than last, as some of the prints sent in were not even mounted, and this when mounting-paper is sixpence a sheet. It is on the whole a good show and, certainly, an interesting one in spite of the difficult conditions.

Naturally, many well-known names are absent from the catalog and a few of the old original exhibitors have not done themselves justice. This is not to be wondered at, for no one has time or opportunity now to devote to making pictures.

Mr. Alex. Keighley, for instance, seems only to be marking time, and his three exhibits this year do little more than keep his name before the public. His work is still hung in the place of honor in the gallery and, no doubt, when peace and leisure return he will devote himself once more to his beloved craft and we shall see him go ahead still further in photography.

The satisfactory thing is that there are plenty of recruits joining the ranks of photography. Many names one had not heard, two years ago, are now under very promising work, indeed, one might say under work which, in its cleverness and sureness of touch, has already fulfilled promise. And one cannot help a sneaking feeling of gratification that so much of this new work is British. It has always been our vogue to depreciate our own efforts and to think that no good thing can come out of England. Now we have proof that even in photography we are not so far behind. This exhibition, the most British that the Salon has ever held,—necessarily on account of transit and other difficulties,—is rather a satisfactory object lesson that we can produce some good and original work ourselves.

Mr. Herbert Lambert is a comparatively new name in the pictorial photographic world, though he has been a well-known professional for some years. He has one of the finest child-studies ("Mousie") in the exhibition. His "Cyril Scott," too, is an excellent bit of portrait-work. He certainly had a good subject in this most modern composer and philosopher, and the pose and composition are exactly right. Mr. Scott is represented as a visionary, but an unbending and rather stern one without that flicker of humor and toleration that we remember lighting up the pictorially austere countenance.

There are nearly forty American exhibits in the show, the majority coming from California. This is a remarkably good proportion, considering how Americans' energies are being concentrated on war-work, to say nothing of the difficulties of freight. Photographic prints cannot expect to vie in importance with men and food!

That these were got through in time is a matter of congratulation. It meant some work on the part of the exhibition-organizers, but they certainly help to complete the show. We found ourselves dwelling on many of them with keen enjoyment—"Solitude," by Mr. Anson Herrick, of San Francisco, and "The Beach in the Cove," by Mr. John Paul Edwards, of Sacramento, are two very pleasant memories.

We have yet another exhibition of war-photographs open in London at the Mendoza Galleries, Old Bond Street. This show, which is free to the public, is of Italian photographs. Every phase of the difficult campaign carried on in the mountains of Northern Italy against the Austrians is illustrated. There are pictures of such novel features in warfare as the Teleferica, an over-head cable by which men, guns, ammunition and provisions are taken up the mountains. Alpine dogs at work in sledges, soldiers on skiis, and ladders up sheer precipices, and other reminders of the arduous and difficult campaign in the mountains. One of the most personal and interesting touches in the whole show is a photograph of the city of Vienna made by Major D'Annunzio from the air during a raid, presumably one of the peaceful ones when propaganda leaflets, instead of bombs, were distributed.

As showing the ingenuity of the Germans and the straits to which they are reduced through the absence of raw materials, the captures of webbing and cord recently taken by the British are interesting. Samples of these materials which are made entirely of paper have reached us direct from France, and, although perhaps they do not fall strictly in our province as photographic recorders, it is possible that readers of PHOTO-ERA may be interested to see what they are like, for which reason we have made a photograph of them and enclose a copy with this letter. The picture shows the specimens rather more than half life size, and it will be noted that the webbing has been unraveled at one corner exposing the flat strands of paper of which it is made. The material seemed strong and firm enough for any purpose; but was not tested in water. Its probable use was for machine-gun bands and girths; one cannot help thinking that a wet winter would put a very heavy strain on it as it cannot be as strong as if made from hemp. The webbing was ornamented with a violet strand woven in near each edge; this, however, does not show in the photograph as we had not an orthochromatic plate to hand when the photograph was made.

With the threat of the rationing of photographic plates ever before our minds, we have had occasion lately to make some experiments in the saving of material. Some little children required immortalizing (photographically, of course) and, as is our method, we required to make fairly exhaustive studies; but this means many plates. Consequently, quarter-plate size was used instead of the usual half-plate, and finished prints were obtained by enlarging to half-plate. Thanks to the variety of bromide paper, now to be obtained, the results were virtually identical with our old direct prints: there was somewhat more trouble, but the saving in expense was considerable, as many dozens of plates were used.

Flashlights in the Studio

ALTHOUGH "smokeless" flashpowders have been advertised, from time to time—states the *British Journal*—we are afraid that the description is far from accurate, for with the best of them the atmosphere of an ordinary studio would be unbearable after, say, four flashes in rapid succession, and long after the air was breathable again there would be enough smoke left to prevent any chance of making a bright negative. We must, therefore, find some method to evade this nuisance, and this is best done by firing the flash in a closed receptacle, so that the smoke never enters the studio. This may be done either by making a cabinet, with a tube or chimney communicating with the open air, or by firing the flash outside the studio-window. The latter is perhaps the better course, as the floor-space of the studio is not encroached upon, although the necessity for a cabinet is not removed, as not only is a reflector behind the light very desirable, but it is necessary to cover the flash to prevent annoyance to the neighbors. A light wooden or iron box about three feet square on the front and twenty inches deep may be hung close under the eaves of the studio, and this, furnished with a pan and igniting-device, is all that is needed. If of wood, the interior and exterior should be thickly coated with whitewash. The top of the box should have a six-inch hole to allow the smoke to escape, this being covered with a lid supported on blocks to keep the rain out; a pane of glass should be made to hinge or move otherwise, so that the lamp can be recharged from the inside of the studio. A cabinet for inside use may be made on the model of a "Punch and Judy" show, a light wooden framework being covered with canvas which is well whitewashed on both sides; the proscenium opening, which should come lower down than in the genuine article, is covered with close muslin or nainsook, which should be saturated with alum or tungstate of soda. The chimney may be of card if straight or of calico sewn over a spiral wire, the outlet end being carried into the open air by any convenient route. In these days of electricity, flashlight is not often used in regular studio-work, but there are many working in camps or villages to whom it is a necessity for winter-work.

WITH THE TRADE

Eastman Kodak Co. to Make Rare Chemicals

When the allied planes attack Mannheim, the point at which they aim to drop their bombs is the great Baden dye-works just outside the city. This is the largest dye-works in Germany and has been converted very largely from its original purpose to the manufacture of high explosives and poison gases. It was because the manufacturers of dyes had available a large force of research chemists that Germany was able to produce so quickly the explosives and the poison gases for the war. This was an important part of Germany's plan of preparedness.

The mobilization of the largest force of chemists in the world at Washington for work on poison gases shows how vital research in organic chemistry is at the present time. One of the great advantages of German research chemists before the war was the possession of a ready source of the chemicals from which their work could be started, the production of these rare chemical reagents being a monopoly in the hands of a few German firms. With the cutting off of the German supply, it became necessary for American research chemists to make their own chemicals for research-work. This occasioned delays in important work—delays which could be lessened to a small extent only by the efforts of our universities, a few of which came forward.

In order to make sure that the chemists of this country may for all time be independent of German chemists and their products, and may have an adequate supply of the chemicals necessary for such research-work as this war has shown to be an important preparedness measure, the Eastman Kodak Company has arranged to establish a department of its Research Laboratory to make these rare chemicals. The work will be done exclusively by women chemists as assistants, the nature of the work being such that it is considered suitable for them. It presents an opportunity for women to take an active part in chemical work of national importance. The new laboratory will be under the charge of Dr. H. T. Clarke, and it is expected that before long German monopoly in the production of the reagents necessary for chemical research-work will be a thing of the past.—*Studio-Light.*

Mechanical Retouching-Pencil

A patent has been issued in England for a mechanical retouching-pencil. The pencil-point merely revolves on a tiny circle, but as the pencil is moved over the surface of the negative, the stock "stroke" may be maintained at any speed without any effort on the part of the operator other than that of gently moving the lever of the motor. The spring of the pencil ensures even contact of the pencil-point on the negative.

Other points—such as the adjustability of the size of the "stroke"—need not be enumerated here; but it is hoped that this invention will reduce the tediousness and burden of photographic retouching, greatly increase the speed of the work, and improve the quality (because the "stroke" is so much more under the control of the operator). As the "stroke" is produced automatically, apprentices may become skilled retouchers in a comparatively short time.

J. A. Dawes

It is with feelings of personal sorrow that we record the death, by the Spanish influenza, of Mr. J. A. Dawes, manager of the Promotion of Trade Department, of the Wollensak Optical Company, Rochester, N.Y., October 30, last. It was only in our November issue that we were pleased to pay a tribute to the high character, eminent business-qualifications and lovable personal traits of our departed friend. He made a pleasing and lasting impression at the Springfield Convention, last August, by a practical talk on modern lenses (published in full in November Photo-Era) and a stirring patriotic appeal in behalf of our soldiers in France. Mr. Dawes had youth, ambition and health, a charming and devoted wife and everything to live for; but his career was brought to a sudden close by an all-wise Providence. Our sincere sympathy is extended to his family and to his firm.

When the Studio-Shutter Gives Out

When the rubber bulb and tubing of a studio-shutter gives out, *que faire?* Write to Belle Johnson, the capable and resourceful portrait-photographer of Monroe City, Mo., asking for details of her device to meet such an emergency. Her shutter was in a bad way; but her ingenuity came to the rescue.

War-Time Value of Negatives

The special circumstances occasioned by the war have introduced a new element into the valuation of negatives forming the stock-in-trade of every portrait business, and particularly those which have numbered soldiers of any rank largely among their customers—says the *British Journal of Photography.* The new element is the very much greater proportion of business which is obtained in the shape of re-orders. Probably the degree to which the re-order has taken a large place in the business of a studio that supplies portraits at a low or medium price has come as a surprise to many a proprietor whose previous experience has led him to look upon much of his large stock of negatives as so much dead material, to be kept as showing the size of his business, but not otherwise a major asset. The war, with its mixed tale of fatalities and distinctions, has had one effect of revising the money-producing value of negatives which have been in stock for a time measured in two or three years, or, may be, as many months. While the duration of their value is as problematical as anything else is in these days, it would be ridiculous to assume that conditions can alter so rapidly that it can sink speedily to its former level. If peace were declared to-morrow, the enhanced value in the aggregate of such negatives could not disappear for a long time to come and, therefore, in assessing the value of stocks of negatives, when the question of the sale of a business arises, it is no more than fair that their valuation should be based upon the actual amount of re-orders derived from them over a given period of time. Due allowance for this asset should be made.

Begin Photographic Reconstruction Now!

THE present and the immediate future is of vital importance to the photographic industry. Photographic dealers and manufacturers no doubt realize—and they should be made to realize if they do not—that a period of very keen competition is close at hand. Many photographic manufacturers have withstood the hardships brought on by the war and are about to make a determined effort to open up the market to goods of their own manufacture. Other manufacturers have prospered and enlarged their equipment, fostered by the demands of the government. Still others have gone to the wall; but now these are obtaining new capital with which to begin all over again. Virtually the same thing may be said of photographic dealers. In short, there is a decided restlessness apparent in the industry which augurs an early peaceful offensive on the markets of the world.

Our British cousins have long been famous for the excellence of their photographic apparatus; and, despite four years of war and air-raids, they have continued to prepare for peace. The result of their well-planned effort is that they are ready to reconstruct their photographic industry the moment that the war is ended. A striking point is that many British manufacturers have advertised consistently, although they could not fill orders and have said so frankly in their advertisements. Their policy was to keep their names before the public and they have succeeded in doing so, much to their advantage. Our British cousins are going to compete with us in all friendliness; but let me assure American photographic manufacturers and dealers that we have "got to go some" to hold our own.

In one sense, we are all going to begin over again. This very fact gives us the opportunity to eliminate much dead wood in business-methods and personnel. Let us all get together and make something of the photographic industry in the United States. Let us all push in the same direction. There is going to be competition—much of it—but there is no need to make it bitter. Remember that, after all, the photographic industry is *our industry*, and that its prosperity is *our prosperity*. Photographic competition should be like the inter-class football-games of a large university—played with spirit, but in no way affecting the participants' loyalty to their *alma mater*.

As soon as conditions permit, we should resume our manufacturers' and dealers' conventions, inject new life into them, and arouse a spirit of unity of purpose that will surmount all obstacles. We should all attend these conventions—and the professional photographers' conventions as well—not for what we can get out of them, but rather for what we can give of our best to others. Remember the biblical axiom, "as ye sow, so shall ye reap"—it applies to modern business, and to the photographic industry in particular.

Pictorial photography in the United States is winning the enthusiastic admiration of our British friends at the famous London Salon. I wonder if dealers and manufacturers appreciate what this means. Anything and everything that raises the science of photography to higher and finer artistic standards is a direct asset to every dealer and manufacturer. Why should not manufacturers be proud of the fact that the first prize picture in a world-famous photographic salon was made on their film, plate, paper or developed with their developer? In rifle-shooting, the manufacturer whose cartridges or rifles were used by the winners of the match, announces the fact eagerly. If his cartridges are good enough to win an important rifle-match, they are certainly good enough for the average sportsman. If a certain dryplate is good enough to win a first prize, why should not the manufacturer bring this fact to the attention of amateur and professional photographers? Camera-clubs, throughout the country, are striving to improve the technique and artistic side of photography; and, in my opinion, every reputable camera-club merits the hearty support of photographic dealers and manufacturers. The photographic industry has no stauncher friends and supporters than the up-to-date camera-clubs of the United States.

We have considered the advantages of the elimination of bitterness in competition, the closer harmonious relationship between dealers and manufacturers and the distinct service that is being rendered to the industry by progressive camera-clubs. What of the photographic magazines of the United States? Are they of any real value to the photographic industry? Do they help or hinder the development of public interest in photography? Is their support worth anything to the dealer and manufacturer? The consensus of opinion—expressed by the foremost photographic manufacturers, dealers, amateur and professional photographers in this country—is that the photographic magazines are vitally essential to the industry. They are the sensitive antennæ that catch the messages of public opinion which would reach the manufacturers and dealers in no other way, and they display pictorially the results obtained with the manufacturers' products. The photographic magazines have high standards and not one would knowingly countenance that which was fraudulent. Most important of all, every photographic magazine is working tooth and nail to promote photography—to arouse the public to a realization of its importance to science, education, health, and the arts. What greater influence is there for commercial, technical and artistic progress in the industry than the photographic magazines?

The permanent value of the photographic magazines is acknowledged; and for this very reason, manufacturers and dealers should realize what opportunities are offered to them through the photo-magazines during the tremendously important reconstruction-period now at hand. The manufacturer cannot prosper if he does not sell his goods, the dealer must sell the goods in turn and the photographic magazines must sell subscriptions and advertising-space to be able to serve the industry to the best advantage. The more advertising, the more money there is for the editor to put new life and "punch" into every department of his magazine. This results in greater influence in the industry and greater influence means greater circulation and greater circulation gives every advertiser greater publicity.

The vital point of this appeal is the imperative need of mutual co-operation and support between photographic manufacturers, dealers, camera-clubs, professional photographers and the photographic press during the days to come—to the end that *our industry* may thrive as never before. It can be done, and must be done, for the good of every individual in the industry. In no country have the photographic manufacturers a finer war-record with regard to real patriotism; and as for the dealers, camera-clubs, professional photographers and photographic magazines, their record is one to make us all proud. The next step will be to divert our war-energy to peace-energy and let us all see to it that the magnificant war-record of the photographic industry is superseded only by its achievements of peace.

A. H. B.

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The camera in the air

will play a most important part in the winning of the war. The exacting demands of the aerial photographer require extreme care in the selection of a printing medium.

GRADATION must be such that finest variations in tonal quality shall be perfectly recorded and every object depicted perfect in every detail.

LATITUDE must be broad enough to compensate for the varying densities of negatives made under different light conditions.

SPEED must be sufficient to permit prints to be made in record time with whatever light source is at hand.

ENLARGING CYKO

Regular and Contrast Grades

produces prints which fulfill these requ
registering all that the observer can de

For commercial and studio photogra
that is found satisfactory for aerial w
far from the ideal.

ENLARGING CYKO

is a *chloride*, not a bromide, paper, possessing
speed, and unlike a bromide paper, gives, in projecte
enlargements, contact print quality. That is why it
is such an overwhelming success.

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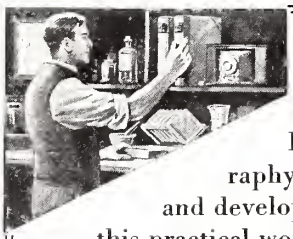
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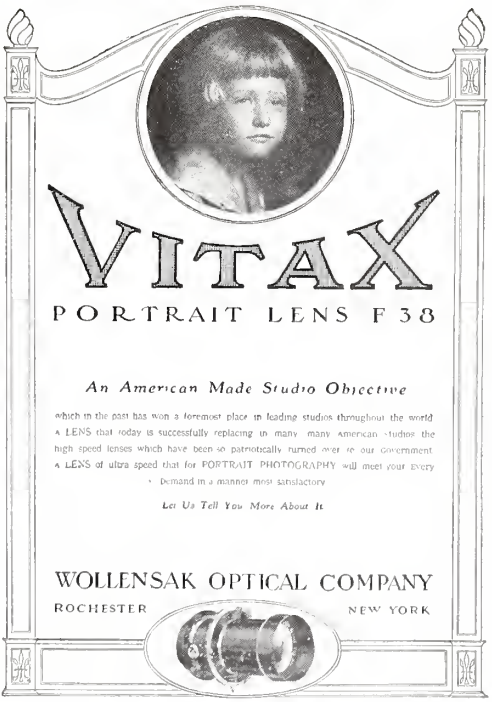
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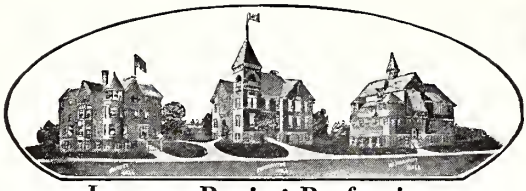
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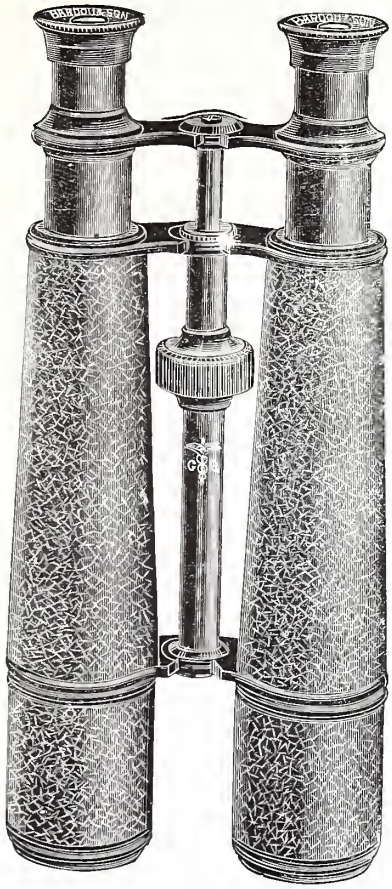
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Telescopes that magnify less than six (6) times, opera-glasses and bird-glasses —however excellent—lack the necessary magnifying-power and range and are NOT DESIRED.

Every Loyal American

will consider it not only his duty, but his privilege, to serve his country in this grave hour of need.

Owners of instruments should send them without delay by parcel post or express carefully packed and plainly addressed to Hon. Franklin D. Roosevelt, Assistant Secretary of the Navy, care of the Naval Observatory, Washington, D.C.

FOR THE NAVY!



PRISM-BINOCULAR

This advertisement prepared and contributed by Wilfred A. French, Publisher



What an enormous hand!

No fault of the lady, but of the amateur.

This error, and many others, commonly committed by beginners, are illustrated and described, with instructions how to avoid them, in Chas. M. Taylor's book:

"Why my Photographs are bad"

The book contains many illustrated "Don'ts," and is a valuable, practical aid to the inexperienced camera-user. 200 pages, 30 full-page plates. Mailed, postpaid, to any part of America, on receipt of $1.00. With Photo-Era for one year, $2.75.

Sold only by **Photo-Era, 367 Boylston Street, Boston, Mass.**

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25	*Amateur Photographer's Weekly*	*1.50*
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Country Gentleman (w)	**1.00**	**Ladies' Home Journal**	**1.50**	**Popular Mechanics**	**1.50**
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Hearst's Magazine	1.50	Motor Boating	1.50	Vanity Fair	3.00
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To obtain the club-price of any combination of periodicals from the list given above, find the class-number of each of the magazines in the left-hand column, add them together and multiply the sum by five cents. The result is the club-price in the United States. Canadian or foreign postage is extra, and must be added to the price of each magazine. We shall be very glad to state the amount of either Canadian or foreign postage, and to fill orders for any magazines, whether listed here or not. Let us make a quotation on the list you desire. Our prices are equal to the lowest.

PHOTO-ERA MAGAZINE, 367 Boylston St., Boston, U.S.A.

For Your Photographic Library

Standard Photographic Books and Art-Books Which Every Camera-User Should Own

will be found listed below. For detailed information regarding them, read the reviews in the issues of PHOTO-ERA indicated at the right of each title. Orders for any of these books will be filled promptly at the published price.

Any photographic or art-book, not in this list, will gladly be procured on request.

Add one year's subscription to PHOTO-ERA to any book-order for $1.55 additional.

PHOTOGRAPHIC BOOKS

American Annual of Photography, 1918 (cloth)	*Percy Y. Howe*	$1.75	Jan. 1918
*The Camera-Man (His practical experiences)	*Francis A. Collins*	1.30	Dec. 1916
The Dictionary of Photography	*E. J. Wall, F.R.P.S.*	2.50	July 1912
Everyman's Chemistry	*Elwood Hendrick*	2.00	Dec. 1917
Handbook of Photomicrography	*H. Lloyd Hind & W. B. Randles*	2.50	June 1914
*How to Make a Studio Pay	*Frank Farrington*	1.00	Nov. 1914
*Modern Telephotography (paper edition)	*Capt. Owen Wheeler*	.75	Aug. 1910
*Photography for Students of Physics and Chemistry	*Louis Derr, A.M., S.B.*	1.40	Dec. 1913
Photography for the Sportsman-Naturalist	*L. W. Brownell*	2.00	Apr. 1914
Photography in Colors	*George Lindsay Johnson*	2.00	Sept. 1914
Photography of To-Day	*H. Chapman Jones, F.R.P.S.*	2.00	Dec. 1912
Photographic Optics and Color-Photography	*George Lindsay Johnson.*	3.00	Jan. 1910
*Pictorial Landscape-Photography	*Paul Lewis Anderson*	1.50	
Pictorial Photography—Its Principles and Practice	*Paul Lewis Anderson*	2.50	Oct. 1917
Practical Kinematography and Its Application	*Frederick A. Talbot*	1.25	
*Artistic Retouching, Modeling, Etching	*Clara Weisman*	2.00	Sept. 1908
A Treatise on Photographic Optics	*R. S. Cole*	1.50	
The Romance of Modern Photography—Its Discovery and Achievements	*Charles R. Gibson, F.R.S.E.*	1.50	Dec. 1917
Saturday with My Camera	*S. C. Johnson*	1.75	Nov. 1914
*The Home-Life of Wild Birds	*Francis Hobart Herrick*	2.00	June 1918
*Why My Photographs Are Bad	*Charles M. Taylor*	1.00	Dec. 1917
Cassell's Cyclopædia of Photography (Two Volumes)	*Bernard E. Jones*	7.50	Mar. 1918

ART-BOOKS

The A B C of Artistic Photography	*A. J. Anderson*	$2.50	Dec. 1913
The Art of Uffizi Palace and Florence Academy	*Charles C. Heyl*	2.00	Dec. 1912
The Art of the Venice Academy	*Mary Knight Potter*	2.00	Sept. 1914
The Art of the Wallace Collection	*Henry C. Shelley*	2.00	July 1913
Art-Treasures of Washington	*Helen W. Henderson*	3.00	Feb. 1912
Boston Museum of Fine Arts	*Julia De Wolf Addison*	3.00	Aug. 1910
The British Museum: Its History and Treasures	*Henry C. Shelley*	4.00	Mar. 1912
Composition in Monochrome and Color	*Arthur W. Dow*	5.00	Apr. 1913
How to Study Pictures	*Charles H. Caffin*	2.50	
One Hundred Masterpieces in Painting	*R. C. Witt*	4.00	May 1911
The Pennsylvania Academy of Fine Arts	*Helen W. Henderson*	3.00	Feb. 1912
Pictorial Composition and the Critical Judgment of Pictures	*Henry R. Poore, A.N.A.*	2.00	July 1913
Picture-Dictionary	*J. Sawtelle Ford*	1.00	Oct. 1917
A Treatise on Art. In Three Parts	*John Burnet, F.R.S*	1.50	Dec. 1913

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Send all orders, with remittance, direct to

PHOTO-ERA MAGAZINE, 367 Boylston Street, Boston, U.S.A.

All cheques, except on national banks, require 10 cents additional for exchange



The Graflex

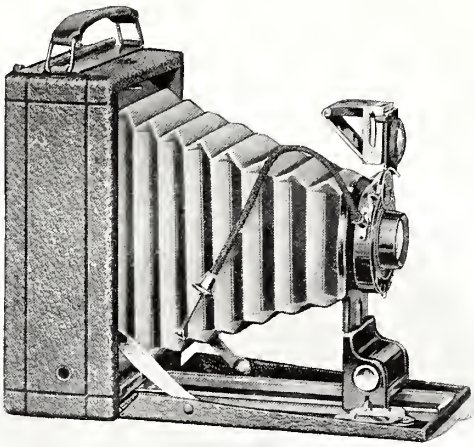
A reflecting camera that lets your eye see what the lens sees, *before* exposure, and right side up. You watch the ground-glass screen, adjust focus till the image of your picture grows clear and sharp—then snap it.

See the picture before you snap it

SIMPLICITY, speed, absolute control of focus and composition — the satisfaction that follows increased certainty — this is the Graflex story. Automatic exposures from a tenth to a thousandth of a second; successful *snapshots* in failing light, where slow exposures with other cameras would result in failure; fully-timed negatives, in good light, of two-mile-a-minute motion that other cameras could *never* get. Ask your dealer, or write us, for free copy of the 64-page Graflex Book.

FOLMER & SCHWING DEPARTMENT
Eastman Kodak Company
Rochester New York

GRAFLEX Camera



Premoette Senior

An exceptionally light and compact camera for the size of picture it makes.

The Premoette Senior is made in three sizes, 2½ x 4¼, 3¼ x 4¼, 3¼ x 5½, and is equipped with Rapid Rectilinear, or Kodak Anastigmat Lens *f*.7.7, mounted in the Kodak Ball Bearing Shutter.

The camera may be quickly loaded and unloaded in daylight with the Premo Film Pack, containing twelve exposures of Eastman N. C. Film.

Attractively finished and exceptionally simple in operation, the Premoette Senior will meet the requirements of anyone desiring a reliable camera at moderate cost.

Ask for the 48-page Premo Catalogue
free at your dealer's or by mail.

ROCHESTER OPTICAL DEPARTMENT,
EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*

GET IN THE GROUP, YOURSELF



It is a well known axiom that a person can not be in two places at the same time. He couldn't be behind the Kodak making the group picture and in front of the lens as a member of the group. As a result in such pictures something was always lacking—and this something was the man who released the shutter.

Such an exasperating state of affairs could not be allowed to continue and so Kodak ingenuity stepped to the fore. Now you can take a picture and be in the picture as well. The Kodak Self Timer has solved the difficulty.

You rest the Kodak on a proper support—the Kodak Metal Tripod immediately suggests itself—compose the view, get the Kodak in correct focus, ask Harry to step just a trifle to the left and Mary to come forward a step or two and then you are ready for the Kodak Self Timer. It is the Kodak Self Timer—and not you—that is actually going to release the shutter.

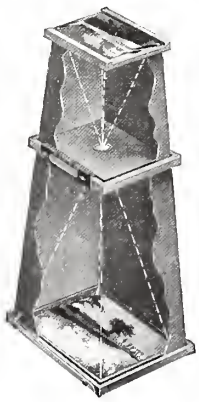
You adjust it, let us say, so that it will operate in approximately thirty seconds. This gives you time to spare in which to regain the group and to wear the smile that most becomes you before the "click" gives notice that the picture is made.

The Kodak Self Timer is simply a mechanical means of automatically releasing the shutter from one-half second to three minutes (according to adjustment) after it has been set.

The Timer is made in one size only, but this size may be used successfully with any camera fitted with cable release. It can not be used with bulb release.

The Price

Kodak Self Timer - - $1.25



It's as simple to make enlargements with a

Brownie Enlarging Camera

as it is to make pictures with a Kodak.

THE PRICE.

V. P. Kodak Enlarging Camera, for 3¼x5½ enlargements from 1⅝x2½ negatives - - - - -	$2.50
No. 2 Brownie Post Card Enlarging Camera, for 3¼x5½ enlargements from 2¼x3¼ negatives, - -	2.50
No. 2 Brownie Enlarging Camera, for 5x7 enlargements from 2¼x3¼ negatives, - - - - -	3.00
No. 3 ditto, for 6½x8½ enlargements from 3¼x4¼ negatives, - - - - -	4.00
No. 4 ditto, for 8x10 enlargements from 4x5 negatives (will also take 3¼x5½ negatives), - -	4.50

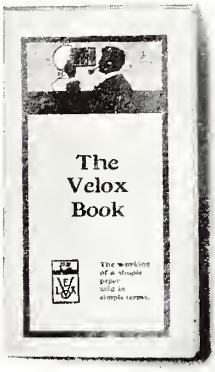
EASTMAN KODAK COMPANY,

ROCHESTER, N. Y.

At your dealer's.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*



HAVE YOU A COPY OF THE VELOX BOOK?

"Ask your dealer for the Velox Book or write us for a copy."

You have read this phrase time after time. But did you get a copy or did you just think that it would be a nice thing to have and then forget about it?

The Velox Book, first and foremost tells you all about Velox—the photographic paper made especially for the amateur—a paper that helps him make good pictures. And this is not mere superficial description. The Velox Book is a handy compendium of printing information. It explains the proper grade of paper for the various types of negatives and shows by half-tone illustrations the effects secured. It tells you how to mix up your solutions, gives you successful formulas—in fact, from cover to cover offers you photographic pointers that you can not afford to miss.

If you are interested enough in photography to be reading this publication—and obviously you are—then you will be interested in the Velox Book.

And so again:

"Ask your dealer for the Velox Book or write us for a copy."

Your Kodak dealer will be glad to give it to you—or we will be glad to send it.



KODAK PORTRAIT ATTACHMENT

slips on over the regular lens equipment and enables you to bring your Kodak within arm's length of the subject to be photographed. The result is a large image direct.

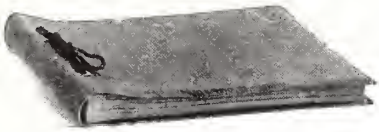
The name indicates that it is of particular value in making impromptu portraits.

Price, fifty cents.

EASTMAN KODAK CO.,
ROCHESTER, N. Y.

Eastman Kodak Company

ROCHESTER, N. Y., *The Kodak City.*



THE KODAK ALBUM

You put your money in a safe place and it accumulates interest.

You put your Kodak pictures in a safe place and they accumulate interest.

The safe place for your money is the bank.

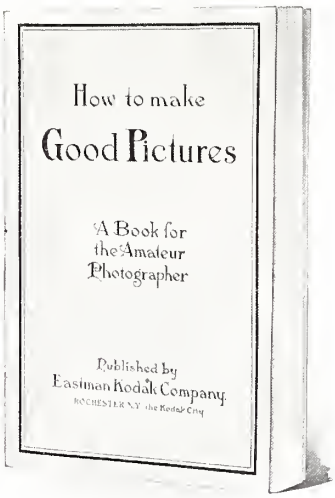
The safe place for your pictures is the album.

You can never charge off depreciation on a picture. It gains in value with the years. The pictures that you may have made in 1898 of your local National Guard unit as they entrained en route for Cuba are much more valuable today than when they were snapped. The pictures that you are making in these stirring times—pictures that show how your town is helping to win the war—will gain in interest, year by year. Never were pictures so worth the taking—never so worth the keeping.

There is just one way to properly keep pictures and that is between the pages of an album. The 1918 line of albums offered by the Eastman Kodak Company is adequate enough for even the most exacting amateur. Heading the list is the Kodak Album, which is constructed on the sensible loose-leaf principle. It is unusually handsome—even for a Kodak album. The cover is of one-piece, narrow grained cowhide with edges in Oxford Bible style. The fifty leaves which the album contains—although more may be added as desired—are held in place by black silk cord run through metal tubes. The Kodak Album is an album de luxe.

The Price

4¾ x 7, A, 50 black leaves, . .	$3.00
7 x 11, B, 50 black leaves, . .	4.50
Package 12 extra leaves, A, $0.12; B,	.15



Every step in the making of good pictures is covered thoroughly, authoritatively between the pages of this book.

THE PRICE.

Library edition, - -	$1.00
Paper edition, - -	.25

EASTMAN KODAK CO.,
ROCHESTER, N. Y.

At your dealer's.

To the People of Germany they said:



Jedes
Deutschen
Pflicht

ist es —

nur deutsche Erzeugnisse zu verwenden
und dadurch die deutsche Industrie zu unterstützen.
Deshalb verwendet für eure photographischen Zwecke
nur deutsche Kameras, deutsche Platten und Filme,
deutsche Papiere! Wer die Erzeugnisse der feindlichen
Industrie kauft, stärkt die Wirtschaftskraft unserer Feinde

Deutsche, merkt euch

für alle Zeiten, daß mit eurer Unterstützung die amerikanisch-englische Kodak-Gesellschaft schon vor dem Kriege mit Amerika rund 50 Millionen Mark auf die Kriegsanleihen unserer Feinde zeichnen konnte!

Es gibt keine deutschen „Kodaks"

„Kodak" als Sammelname für photographische Erzeugnisse ist falsch und bezeichnet nur die Fabrikate der Eastman-Kodak-Company. Wer von einem „Kodak" spricht und nur allgemein eine photographische Kamera meint, bedenkt nicht, daß er mit der Weiterverbreitung dieses Wortes die deutsche Industrie zugunsten der amerikanisch-englischen schädigt.

Verband Deutscher
Amateurphotographen-Vereine.

Berlin-Steglitz, im Oktober 1917
Bessel-Straße 13

Auskunft in allen Liebhaberphotographen-Angelegenheiten wird bereitwilligst erteilt

The illustration shows a pamphlet signed by the Association of German Amateur Photographers' Societies and dated Berlin, October, 1917. It is reproduced from a photographic copy lately received in this country. The translation in full is given on opposite page.

—*If it isn't an Eastman it isn't a Kodak!*

A translation of the circular in full is as follows:

"It is the duty of every German to use only German products and to patronize thereby German industry. Therefore, use for photographic purposes only German cameras, German Dry Plates and German papers. Whoever purchases the products of enemy industries strengthens the economic power of our enemies.

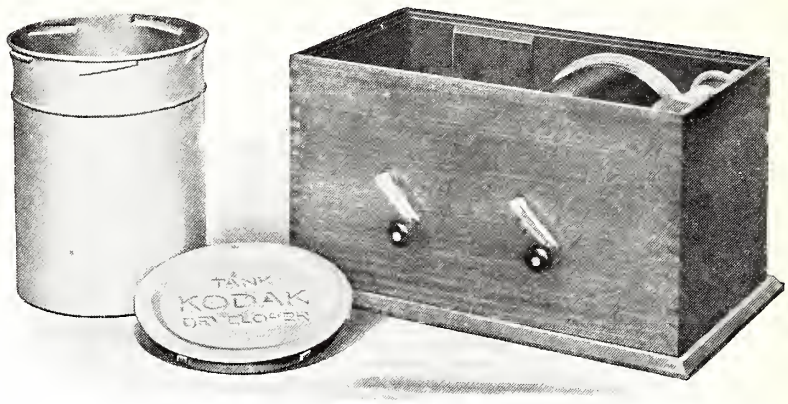
"Germans! Remember for all times to come that with the aid of your patronage the American-English Kodak Co. subscribed before the war with the United States, the round sum of 50,000,000 marks of war loans of our enemies!

"There are no German 'Kodaks'. ('Kodak' as a collective noun for photographic products is misleading and indicates only the products of the Eastman Kodak Co.) Whoever speaks of a 'Kodak' and means thereby only a photographic camera, does not bear in mind that with the spreading of this word, he does harm to the German industry in favor of the American-English."

If it isn't an Eastman it isn't a Kodak!

EASTMAN KODAK COMPANY
Rochester, N. Y. *The Kodak City*

All by Daylight



Nothing is left to chance with the

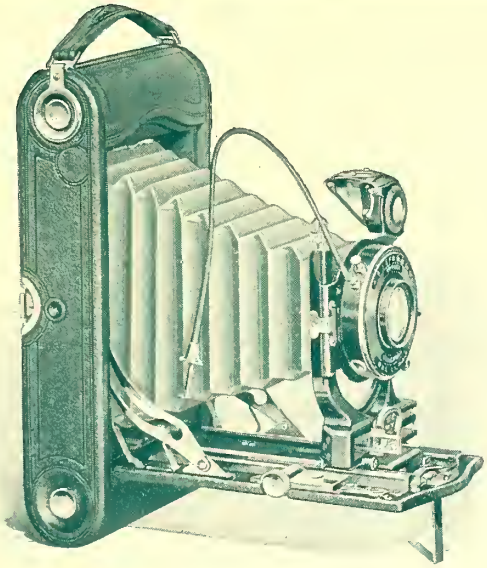
Kodak Film Tank

No guess work—a definite time of development, at a definite temperature, and then fog-free negatives that as far as developing goes could not have been improved upon.

Prices from $2.75 up
according to size.

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

At your dealer's.



3A Autographic Kodak *Special*

Pictures, size of a post card—anastigmat lens equipment and shutter of the highest grade—Kodak Range Finder that finds the focus for you—autographic attachment—rising front—aluminum construction—rich finish with genuine Persian Morocco, black bellows of selected leather and highly nickeled parts.

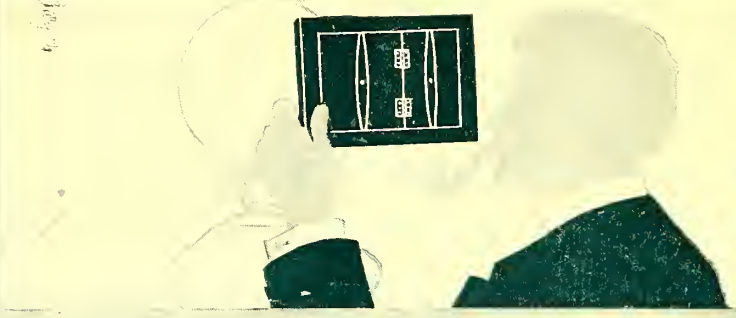
These are just a few of the reasons why the 3A Autographic Kodak *Special* is the camera de luxe of the Kodak line.

PRICES

3A Autographic Kodak *Special*, Kodak Anastigmat lens, *f*.6.3, and Optimo shutter, ...	$60.00
Ditto, with Bausch & Lomb Kodak Anastigmat lens, *f*.6.3,	76.25
Ditto, with Bausch & Lomb Tessar Series IIb Anastigmat lens, *f*.6.3, ...	91.50

EASTMAN KODAK COMPANY,
ROCHESTER, N. Y.

Ask your dealer for a copy of the 1918 Kodak Catalogue.



VELOX

A photographic paper that helps you make good prints.

NEPERA DEPARTMENT,
EASTMAN KODAK COMPANY,
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At your dealer's.

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